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CALIFORNIA STATE JOURNAL OF MEDICINE

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JANUARY · 1923

Vol. XXI. No. 1

\$4.00 a Year, Single Copies 35 Cents

California State Journal of Medicine

OWNED AND PUBLISHED MONTHLY BY THE MEDICAL SOCIETY OF THE STATE OF CALIFORNIA
Entered at San Francisco, California, as Second-Class Matter

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VOL. XXI

JANUARY, 1923

No. 1

ORIGINAL ARTICLES

RESPONSIBILITY FOR STATEMENTS AND CONCLUSIONS IN ORIGINAL ARTICLES

The author of an article appearing in the JOURNAL is entirely responsible for all statements and conclusions. These may or may not be in harmony with the views of the editorial staff. Furthermore, authors are largely responsible for the language and method of presenting their subjects. All manuscripts will be carefully read, but editorial privileges will be exercised only to a very limited extent. It is believed that the manner of presentation of any subject by any author determines to no small degree the value of his conclusions. Therefore, both the author and the reader, in our opinion, are entitled to have the subject as presented by the author as little disturbed as possible by the editors. However, the right to reduce or reject any article is always reserved.

RESECTION OF THE DISTAL END OF THE ULNA FOR SHORTENING THE RADIUS FOLLOWING FRACTURE*

By CARL HOAG, M. D., San Francisco

Certain characteristic changes take place in the wrist joint in any fracture of the radius which results in shortening of the bone. It matters little whether that fracture has occurred in the shaft or at the distal end; the ulna becomes relatively too long. It protrudes into the carpus and blocks ulnar flexion. Not only are pronation and supination limited, but the hand is forced to rotate around a new axis which makes an angle with that of the forearm. The difficulty with these deformed wrists is that the hand cannot any longer pull or lift in a straight line with the forearm. Undue strain is put upon certain surfaces of the joint which were not designed originally for such work and eventually there is a straining of ligaments and the development of some arthritis. As we shall see later, there is also, in most cases, at the time of injury, a rupture of the triangular cartilage between the radius and ulna. On account of all the damage done to the joint and the poor position in which it has to work, the hand is weak and the patient remains more or less disabled.

Theoretically, the ideal method of reconstructing

such wrist joints should aim at the elongation of the shortened radius. In certain cases, this can be done by the proper reduction of overlapping fragments or by the use of bone-grafts, but the period of immobilization is necessarily long and, not infrequently, the results are unsatisfactory. Too often the amount of pressure that is necessary to elongate the radius and crowd the articular surface to a lower level than that of the ulna causes a bowing at the point of approximation so that after all the work has been done, the length is found to be unchanged.

It is just as difficult to drag the head of the ulna out of the carpus by removing a section of its shaft. The two ends naturally tend to pull apart and the result is non-union. With either type of operation, the re-establishment of the normal relations between the ends of the bones at the wrist is seldom accomplished because they have become firmly fixed by muscular contractions and scar tissue.

Some time ago, when confronted repeatedly with need for some better procedure in these cases, it occurred to me that the logical thing to do would be to resect the distal end of the ulna. With this type of operation, one could not only remodel the joint, but one would not have to use immobilization afterwards. The danger of non-union would be avoided, and the simplicity of the operation would lessen the danger of infection. Almost immediately after operation, passive motion could be instituted so that the soft tissues could adjust themselves, and a more complete range of motion be preserved.

The only cases selected as suitable for this procedure were those in which there was a definite protrusion of the ulna into the wrist joint sufficient to limit ulnar flexion of the hand with or without subluxation of the ulnar head. They were fractures in which either the shaft of the radius had been shortened by loss of bone or an overlapping of the fragments, or those in which the epiphysis had been impacted or comminuted.

CASE REPORTS

Case I. Age 27, came under my care June 25, 1920. His left hand had been caught in a laundry machine six weeks before, causing a fracture of the radius in the middle third and a dislocation of the ulna, which protruded through the skin into the palm of the hand. An immediate reduction had been done and a cast applied. When I first saw him, six weeks later, he had an ischemic paralysis of the lower arm, a hysterical paralysis of the upper arm, and complete immobility of the fingers. The fractured radial ends were overlapping one inch and the head of the ulna lay just under the

* Read before the Section on Industrial Medicine and Surgery of the Medical Society of California, in Yosemite National Park, May 16, 1922.

skin of the palm, completely limiting flexion of the wrist.

The muscular contraction was such that reduction of the radial fragments was out of the question. One was shortened, therefore, and they were then brought into alignment and wired. At the same time the head of the ulna was resected so that the remaining shaft could be reduced. The radio-ulnar and annular ligaments were carefully sutured. Union occurred slowly, and physiotherapy was carefully carried out. The patient's disabilities, eleven months later, were limited to a loss of 10 degrees of supination; loss of 10 degrees pronation; flexion was limited 15 degrees; extension, limited 10 degrees. There was, however, a marked loss of power of the arm, which was largely attributable to the ischemic paralysis.

Case II. A. B. age 42, female. November 5, 1921. Fell, sustaining a comminuted fracture of the right radial epiphysis into the wrist joint. The reduction which followed was far from satisfactory because of the comminution. When union occurred the ulna was projecting one-quarter inch into the carpus, thereby limiting ulnar flexion. Pronation and supination, limited 45 degrees each. On February 1, 1922, about one-quarter inch of the ulnar head was removed by subperiosteal resection. The triangular cartilage was found fractured and was therefore removed. The styloid process was sutured to the shaft. On April 13, 1922, the patient had no limitation in pronation and only 5 degrees of limitation in supination. Flexion and extension of the wrist were limited 15 degrees each; ulnar and radial flexion, not limited. Styloid moves with carpus; strength, good; still improving.

Case III. L. S.—Male, age 49. Injured January 7, 1922. Fell 100 feet into a stream. Among other injuries, sustained a comminuted fracture of the epiphysis of the right radius. Three months later, after union had taken place, the ulna was found projecting into the carpus about one-third inch and there was considerable callus between the two bones. Rotation of forearm limited to 25 degrees; hand held in marked radial flexion. Extension of the wrist, nil; flexion of wrist, 25 degrees only. These limitations were due not only to the projection of the ulna into the carpus, but to distortion of the radial articulation and the formation of callus about it. Operated on May 6, 1922. Subperiosteal resection of the ulna to level of radial articulation; no triangular cartilage or styloid process found. Too early to report results.

Case IV. C. A. E.—Age, 26, male. Seen in consultation with E. W. Cleary. The patient sustained an oblique fracture of the right radius at the junction of the middle and lower third, by backfiring of a truck engine on September 30, 1920. An open reduction without the introduction of foreign material was immediately done. There was no union or evidence of callus after five months. On March 3, 1921, an inlay bone-graft was done. This graft did not become solid and later fractured because of the lateral bowing of the fragments.

When I saw the case, September 8, 1921, there was still non-union and so much shortening of the radius that the ulna projected into the carpus about one-quarter of an inch.

At my suggestion a two-stage operation was done by L. W. Cleary. (1) Subperiosteal resection of the head of the ulna. (2) Realignment of the radius and bone-graft. These operations were done in November, 1921. Union occurred and the result promises to be most satisfactory, but improvement has been retarded by a mild soft tissue infection in the bone-graft area.

TECHNIQUE

A linear incision is made over the lateral side of the ulna head. The periosteum is slit longitudinally and retracted. The ulnar head is divided with a sharp chisel at the level of the

articular surface of the radius, as calculated from X-ray plates. The severed fragment is stripped out, base first. The triangular cartilage has been found ruptured in every case operated so far, so it has been removed with the segment. If, in any case it should be found normal, it should be left intact. Whether or not the ulnar styloid process is removed seems to be of relatively little importance. It is often fractured. It should be sutured to the shaft if possible, although the late results of all cases operated show that it moves with the carpus. Whether a subperiosteal resection is done or the periosteum is also excised seems likewise immaterial except from the standpoint of preserving the radio-ulnar ligaments and avoiding the formation of callus. It is important to preserve these ligaments but, like the triangular cartilage, they have usually been found ruptured. This is true even in those cases not showing subluxation of the ulnar head. Reformation of bone limiting motion seldom occurs providing a full range of motion is maintained from the start to mold the callus. A satisfactory result depends upon the observance of this point. Usually no splint or cast is necessary. Physiotherapy, including active as well as passive motion, is begun as soon as the soft tissues have healed, usually in about ten days. As the ligaments are disturbed less and early motion will prevent undesirable callus formation, the easier method of subperiosteal resection is recommended. The use of a sharp chisel, instead of a Gigli saw is urged as less damaging to the radio-ulnar attachments.

Certain objections may be raised to this procedure, namely: (1) Loss of the groove for the extensor Carpi Ulnaris tendon. (2) Destruction of the radio-ulnar ligaments with increased mobility of the ulna. (3) Destruction of the internal lateral ligament of the wrist. (4) Instability of the wrist joint due to lack of ulnar support.

The removal of the ulnar head does result in a partial loss of the bony groove for the flexor Carpi Ulnaris tendon. However, if subperiosteal resection is done, the soft tissues maintain the position of this tendon satisfactorily, leaving the periosteum, also preserves the radio-carpo ligaments if they have not already been ruptured. Stability of the radio-ulnar articulation is really as much dependent upon the interosseous membrane, the pronator quadratus, the annular ligament, the tendons and soft parts as it is upon these ligaments.

The internal lateral ligament of the wrist is inserted on the styloid of the ulna. This process is often found broken off and fixed in scar tissue with the carpus. Every effort should be made to preserve or restore the attachment by suture. Loss of ulnar support to the wrist occurs only in those cases where too much of the projecting head has been resected. Careful attention to this point is essential.

Since doing this work, I have searched through the literature and have found one case each by Darrach, Jopsom and Douglas in which the ulnar head was resected. All of these were for condi-

tions associated with ulnar subluxation accompanying Colles fracture. The plan of resecting the projecting portion of the ulna, because it forms a mechanical and functional block to the wrist joint, has apparently not been given serious consideration by previous writers.

Of the four cases which I have reported, in only one was there a subluxation of the head of the ulna. In the other three, the deformity was the result of radial shortening, one of the shaft and two of the lower articular end. The results in these few cases encourage me to suggest a more extended use of this procedure.

SUMMARY

In suitable cases, resection of the distal end of the ulna is often preferable to operative lengthening of the radius or to shortening of the ulnar shaft because:

- (a) The operative technique is greatly simplified.
- (b) It does away with the need for immobilization.
- (c) There is no possibility of non-union and less opportunity for infection.
- (d) Rotation of the forearm and lateral motion of the wrist are more completely restored.
- (e) The restoration of strength and the cosmic results are generally better.

(177 Post Street.)

Louis Pasteur: "Ideal in aim, but realist in method." Of all the worthwhile things that have been said of Louis Pasteur during the celebration recently of the centenary of his birth nothing more completely expresses the thought of scientific men than Willis Fletcher Johnson's brief note in the North American Review, where he says:

"Nothing could be said that would be more pertinent to the centenary of Louis Pasteur, or more accurately descriptive of the essential qualities of that illustrious man, than what, writing on an entirely different subject, Professor Vernon Kellogg says in another part of this Review; to wit, that if one is not a man of vision 'he will never be a great scientist,' and again: 'Ideal in aim, but realist in method.' Pasteur was supremely, perhaps above all other scientists of his age, a man of vision; his opponents called him visionary, an impractical dreamer of impossible dreams; and not in spite of that fact but, as Professor Kellogg suggests, because of it, or at least in accord with it, he became indisputably one of the very greatest scientists of the nineteenth century. It would be difficult to imagine a man more ideal in aim than he; aiming at the elimination of all zymotic and probably all communicable diseases of any kind from the world. It would be not merely difficult but impossible for anybody to be more realistic in method. His conceptions were like those of a spiritual creator; his working out of them vied in practicality and thoroughness with the inexorable processes of nature. In one supreme respect his work was—I write with all possible reverence—like unto that of the Creator of the universe; namely, its unity or at least harmony of design. He began as a chemist, dealing with what we may call the mechanics of chemistry; he became a biologist, at once denying most effectively the chemical origin of life and no less effectively demonstrating the commanding influence of life upon chemistry; and while showing forth as few others have ever done the almost incomprehensible wonders of the material world, he was ever the most resolute and devout of believers in the spiritual world. There is no department of human philosophy which may not fittingly and gratefully pay tribute to his fame."

SYPHILITIC HEADACHE *

THE HEAD-PAINS OF EARLY AND LATE SYPHILIS WITH CASE REPORTS

By IRWIN C. SUTTON, M. D.
Johnston-Wickett Clinic, Anaheim, Calif.

From the time of Fracastor it has been recognized that syphilis may cause headache. This symptom is usually present in varying degree at some stage of the infection and is then a signal of early or late neurosyphilis, of a specific affection of the cranial bones, or of an involvement of the cranial or peripheral nerves.

The Headaches of Neurosyphilis—The "typical" headache of the secondary period has been so fully described in the literature that physicians generally have the impression that all syphilitic head-pains must be clinically identical, with the result that syphilis is often erroneously ruled out as a causative factor in chronic headache. The headache accompanying or even preceding the florid stage is rather common. Out of 200 consecutive cases with early cutaneous lesions seen in our practice, headache was the symptom most complained of in eight instances and was present in varying degree in forty-two.

The pain in this condition may vary from a dull throbbing ache in mild cases to severe flashes, accompanied with fever, giddiness, a slowing of the pulse-rate, and even convulsions. Syphilitic cephalalgia is consistently worse at night. As a rule the pains start in the occipital region and spread up over the vertex in lightning-like flashes, but do not follow the course of any certain nerve. Often of vesperal onset, they may even waken the unfortunate patient from deep sleep, with the whole body aching, as one expressed it, "in concert." While occasionally a superficial tenderness over the skull may suggest a periostitis, or a dull ache may resemble that of any acute infection, all the headaches of early syphilis should be regarded as due to an early meningeal irritation, unless definitely proven otherwise. That the central nervous system is not infrequently attacked during the period of spirochetal dissemination is proved by the clinical and laboratory findings of Moore, Fordyce and Rosen, Wile and Stokes, and the experimental work of Brown and Pearce.

In cerebrospinal syphilis (those cases showing chiefly a meningomyelitis, gummous infiltration, meningitis and specific arteritis, not including paresis or tabes), the headaches are practically continuous, but of great variation in intensity. In sharp contradistinction to those of early syphilis, pain in this group has a strong tendency to exacerbate in the day-time. Transitory visual disturbances may be present with or without other signs of increased intracranial pressure. Posture rarely has any effect on the symptom and in women there is no relation to the menses. On light percussion over the forehead, tenderness may be found, which Mott believes is a valuable sign of meningitis of the convexity.

There may be nothing suggestive of syphilis,

* Read before the Orange County Medical Society, September 5, 1922.

aside from the chronicity of the symptom in the headaches of paresis and tabes. White found five out of 140 patients with paresis suffering with head-pain. On questioning the relatives of 83 paretics, 11 of the insane were found to have complained of pain varying from dull aches to "migraine" and "neuralgia" one to five years before the onset of definite mental symptoms. With the progress of the disease the symptom was complained of less and less. In early paresis vague headache associated with irritability, thoughtlessness and fleeting phobias, is not uncommon and has been well described by the older writers who designated the condition as a para-syphilitic cephalalgia.

Tabetics rarely give a history of frequent headache nor is it a common presenting symptom in this disease. Pain due to meningeal involvement must depend upon the degree of irritation, as basilar meningitis is a fairly uniform finding in tabes dorsalis.

Pain due to Syphilis in the Bony Vault—Fournier in 1860 called attention to the early osteal and periosteal involvement of the cranial bones causing head-pain. The periosteal lesion may cause exquisite pain on light palpation over the skull, with scattered, sharply circumscribed areas of slight edema over the forehead and parietal regions. The characteristic endoscopic bone pains of the extremities may be duplicated in the cranium and are then typically worse at night.

In late syphilis the frontal and parietal bones are favorite sites for gummatous processes. Should the lesion be internal all the signs of increase of intracranial pressure will be present, including even epileptiform convulsions and paralyzes. If the periosteum and overlying structures become involved the clinical diagnosis becomes easier. A tumor mass, tender on light palpation but extremely sensitive when the bony rim of the lesion is made out will be found. The pain is usually dull and sharply limited to the lesion, of sudden onset with increasing severity. Contrary to the observation of Hnatek, I have not found it to be especially worse at night.

Head-pain due to Syphilis of the Cranial and Peripheral Nerves—Pain following the course of a cranial or peripheral nerve is rather an uncommon finding in syphilis. Out of 200 syphilitics with headache as a presenting symptom, this condition was present only twice. One patient suffered with pain over the distribution of the mandibular division of the trifacial nerve and another following the course of the major occipital. There was in both instances a sudden onset, following which there was never a total absence of pain, but there was the greatest variation in its intensity from day to day. In one man observed during an examination of continuous pain, tender spots were pointed out over the course of the affected nerve and there was a distinct loss of the sensibility of heat and cold. This condition was considered to be a neuritis. As Barnes has pointed out that in true neuralgia or tic douloureux, the individual is entirely free from pain in the intervals between attacks. Should anesthesia be found over a nerve

distribution, it should not necessarily point towards a true neuralgia.

The direct cause of a syphilitic neuritis may be pressure exerted on the nerve somewhere in its course by syphilitic new-growths or an infiltration of the nerve itself.

REPORT OF CASES

Headache-Cerebrospinal Syphilis

Case 1.—History—A painter, aged 37, complained of headache and spells. He denied any genital lesion but said he had had sores on both legs diagnosed as syphilitic by an army surgeon twelve years before. He had been dismissed with a bottle of mercury pills and, on the disappearance of the skin manifestations had imagined himself cured. Eight days before the examination was made he noticed cramps in the right arm and leg lasting thirty minutes, accompanied with a throbbing pain in the base of the skull. The attacks of headache were now practically continuous and not controlled by aspirin.

Examination—The pupils were unequal, the left larger than the right but were fairly regular and reacted promptly to light. The deep reflexes were normal throughout. There was some muscular weakness in the left leg and the head of its fibula was enlarged. Characteristic atrophic scars were found on both legs. The serum-Wassermann was weakly positive. The spinal fluid was under pressure and contained 23 lymphocytes, globulin was positive, as was the Wassermann reaction. There was a luetic cold curve.

Treatment—After intensive treatment with soluble mercury the patient was put on arsphenamin. The headache stopped following spinal puncture and under treatment did not recur. Puncture two months later revealed a normal fluid.

Case 2.—History—A negro housewife, aged 40, complained of a dull, continuous headache which tended to wear off towards night. Six months before she had awakened with a pain in the right hip and could not rise from bed although perfectly conscious. She remained in bed for three weeks and noticed on raising her head a stabbing pain in the vertex. Her speech at this time was heavy and swallowing was difficult. The right arm and leg trembled and stiffened on handling.

Physical Examination—There was a marked lateral nystagmus and definite weakness of the left seventh and twelfth nerves, with a spastic paralysis of the right arm and leg. The signs of aortic regurgitation were present and fluoroscopy revealed a dilatation of the ascending aorta. The serum-Wassermann was positive and the spinal fluid showed 24 lymphocytes per c. mm.; a positive Globulin test and the Wassermann positive with two c. c.

Treatment—After a preparatory course of mercury rubs and potassium iodide, and before any arsphenamin was administered, the headaches disappeared, the paralysis was less marked, and the patient refused further treatment.

Headache—Gumma of the Frontal Bone

Case 3. History—A married man, aged 29, complained of an ache limited to the left side of the forehead, which had been present continuously during his waking hours for one week. He had had a genital chancre in 1912 and had received mercury injections for two years thereafter.

Physical Examination—The first time the patient was examined nothing was found to account for the pain. There was a moderate cardiac enlargement with pulsation of the neck vessels but no obvious signs of an aortitis. Eight days later, however, a tumor, 3 cm. in diameter, was discovered on

the left side of the frontal bone. The mass was tender on palpation, but there was no local heat nor redness and no enlargement of the pre-auricular lymph nodes. A roentgenogram revealed a localized periostitis with bony destruction. The serum-Wassermann was strongly positive.

Treatment.—The patient was given arsphenamin and mercury with large doses of potassium iodide by mouth and the lesion with the pain promptly disappeared.

Headache—Syphilitic Neuritis of the Major Occipital Nerve

Case 4. History.—A hotel owner, aged 54, complained bitterly of a dull ache confined to the right side of the occiput which was subject to severe flare-ups and which had been present in varying amount for five weeks. He denied having acquired syphilis, but as he was a dipsomaniac, admitted the possibility of having become infected while on a spree.

Physical Examination.—The patient was a large fat man, very worried and apprehensive. There was a dermatitis over the back of the head and neck from the application of irritants. A slight anesthesia made out over the distribution of the occipitalis major with a distinct loss of sensibility to heat and cold. The pupils were normal and there was no change in any of the deep reflexes. A perforated nasal septum was found. The serum-Wassermann test was negative, as was the spinal fluid examination.

Treatment.—Because of the negative blood test, a provocative injection of arsphenamin was given, and blood collected in 24 hours was found weakly positive. The first injection caused a sharp increase in pain (Herxheimer reaction) but under continued treatment the symptom gradually disappeared.

Aside from the severe headache seen so often in early syphilis, there is little that is typical in the symptomatology of syphilitic headache. Syphilis should be suspected in all instances where head-pain is a prominent and chronic symptom. Headaches which do not disappear on the correction of refractive errors, to the removal of foci and the draining of sinuses, nor to that procedure known as a "cleaning out of the intestinal tract," should arouse the suspicion in the mind of the attending physician that syphilis may be present, and an examination for other signs of syphilis should be made. Among the various diagnostic procedures enumerated by Stokes and Busman, the examination of the fundus, the comprehensive study of the central nervous system, the eye, ear, nose and throat examination, and a careful skin and mucous membrane examination, are the clinical procedures most often rewarded by the finding of other signs of syphilis. In syphilitis of the vault the X-Ray may often confirm the diagnosis, while a solitary brain gumma may cast the shadow of a brain tumor. Fluoroscopy may reveal an aneurysm in the chest, or other evidences of syphilis. The serum-Wassermann test and the spinal fluid examination (cell count, estimation of protein, Wassermann and colloidal gold) are of paramount importance in the diagnosis of syphilis and especially of syphilitic headache. While the therapeutic test may occasionally be fallacious it should be used in all doubtful cases.

UTERINE MYOMATA AND THEIR TREATMENT*

By WILLIAM HENRY GILBERT, M.D., Los Angeles

This paper will not take up the histogenesis, etiology or go extensively into the pathology of uterine myomata.

The location of such a tumor is of clinical importance in deciding upon the preferable method of treatment and it is necessary to bear in mind the different varieties and their symptoms, their location and size and what degenerative processes they have undergone, as well as the complications that exist or may arise.

The question whether the cavity of the uterus is infected is very important from a radiological and surgical standpoint. Uterine myomata may become infected in several ways. Quite frequently they become part of a pelvic inflammation that results from a gonorrhoeal or puerperal infection. When this occurs the inflammation is confined to the peritoneal covering of the tumor and to the surrounding tissues and is manifested by adhesions, hydrosalpinx, hemosalpinx, salpingitis and tubo-ovarian cysts. These very same conditions occur, however, when venereal or puerperal infection can be ruled out. The infection is then carried through the general circulation. This has been proved by the discovery of pathogenic germs in the tissues of fibroids and explains the mysterious elevation of temperature in some myomatous women.

From a surgical standpoint, the bladder occupies a very important position in its relation to the myomatous uterus. Generally its position is unaltered, but I have seen it pulled upward by the tumor and spread over the anterior surface. At other times I have noticed that sometimes in the development of the tumor it becomes involved in the growth of a nodule and as the general enlargement takes place the bladder is pulled upward and to one side. This forms a long tunnel shaped bladder extending sometimes as high as the umbilicus and constitutes a very grave and dangerous complication if injured during operation. The ureter is frequently dilated or displaced by being pulled out of its normal pelvic bed. Hydro-nephrosis may occur as the result of obstruction due to adhesions, kinking, twisting or mechanical pressure upon the tube itself.

Adeno-myomata are distinguished from the ordinary type by the diffuse manner in which they grow in the uterine wall. Their commonest site of growth is in the posterior wall of the uterus near the uterine horns. Rarely do they attain large dimensions. On account of the diffuse nature of their development, it is often difficult to differentiate between tumor and uterine wall. As a rule in these cases the uterus conforms to the normal contour, although it often has a few nodules scattered over its surface. On microscopic examination, it is found that the muscle fibres have become coarse in texture and converted into myomatous tissue. Into the coarse muscle sub-

* Read before the Section on Obstetrics and Gynecology of the Medical Society of California at Yosemite National Park, May 16, 1922.

stance there is proliferation of the endometrium, producing myomatous tissue with bunches of uterine mucosa scattered here and there. As the tumor grows, portions of the endometrium become separated and are isolated. The bits of mucosa in the myomata retain their normal menstrual functions. If the nodule is sub-peritoneal, there is no possible means of escape for this blood and it accumulates until frequently there are formed in the myoma sacs of various size containing a muddy looking fluid which is the retained and changed menstrual blood.

Myomata, no matter where located, are subject to various forms of degeneration, mostly the result of the insufficient blood supply which characterizes these tumors. Softening or hyaline degeneration is the most common form. When this softening occurs the tumor changes in color from its characteristic pink to white or yellowish white. This ivory colored tissue sometimes breaks down and disintegrates and the resulting cavities are filled with a clear serous fluid. Sometimes this fluid is oily in nature and very much resembles melted butter. As a rule, these degenerated fibroids show no signs of inflammation or evidence of infection.

Sarcomatous changes in fibroids take place, especially in long existing tumors during and after the menopause. These cases give histories of tumors growing slowly or being dormant for many years. Suddenly there is evident activity and in a surprisingly short time the growth increases greatly in size with more or less evidence of cohesia beginning to appear. Sarcoma may develop in one or all of the myomatous nodules at the same time and may be expelled from the uterus through the vagina, constituting the so-called recurrent fibroids. There is a wide variation in figures as to the percentage of sarcomatous degeneration in fibroids. It ranges from 2 to 5 per cent and it is of extreme importance to remember this when determining the appropriate method of treatment in women with rapidly growing fibroids who are past the menopause.

Adenocarcinoma of the endometrium is not infrequently associated with myomata. It occurs more commonly in the large long-existing tumors and is in no sense a carcinomatous degeneration of the fibroid as the two processes are histologically entirely distinct. Where cancer of the cervix exists, it will generally be recognized before an operation is made and one can be influenced accordingly in his mode of treatment. Cancer of the body of the uterus presents an entirely different clinical picture and it is very difficult at times to differentiate between that and non-malignant myomata, the suggestive symptoms being practically the same. Nevertheless, when outlining treatment, one should always bear in mind the possible co-existence of carcinoma of the body of the uterus.

The relationship of fibroids to pregnancy is a matter of great importance. Pregnancy affects the growth of these tumors in various ways and the fibroids very often exert a dangerous influence over the course of pregnancy. Without doubt fibroids are one cause of sterility. The percentage of sterility among women is in the neighborhood

of 15 per cent, while that of women suffering from myomata is about 30 per cent. It is probable that of this 30 per cent fully 25 per cent are suffering from sub-mucous myoma. This type of fibroids, as we have seen, produces extensive changes in the endometrium. With the part of the uterine mucosa over the surface of the tumor thinned and devoid of practically all epithelium, and the rest of it hypertrophied, it is very poor soil for the growth of the ovum. Those who do become pregnant and abort, in all probability are suffering from an interstitial myoma. This type of tumor disturbs the muscular tension of the uterus and the ovum is expelled.

Uterine myomata grow rapidly during pregnancy due to the growth taking place in the physiological hypertrophy of the uterine muscle. This enlargement may be progressive after the birth of the child or, for the time being, it may be reduced in size. Fibroids atrophy occasionally during pregnancy, but this is not the rule. During pregnancy their blood supply is diminished—this is especially true of the pedunculated sub-serous type—and may result in necrotic changes taking place in the tumor, or in sloughing of the pedicle. Fatty degeneration during pregnancy is not an uncommon occurrence. The influence fibroids exert over the course of labor depends upon the location and size of the tumor. One of large size may be so located as not to interfere with delivery. On the other hand, a much smaller growth located in the lower segment of the uterus would interfere, very effectually with normal delivery.

If pregnancy occurs in a uterus filled with large and small myomata which encroach upon the uterine cavity to such an extent as to make one believe that the pregnancy will not advance beyond three or four months, hysterectomy should be performed irrespective of the life of the ovum. If the myomata are cervical and so fill the pelvis as to make labor impossible through the normal passages, the matter should be explained to the family and the question of Caesarian section at term followed by hysterectomy at a later period decided upon. While hysterectomy often can be made at term, those of you who have operated large cervical myomata will understand the difficulty often experienced in their removal. As a consequence, the surgeon must be guided in each case by the condition existing at time of operation.

Treatment—The treatment of uterine myomata whether surgical or radiological in the non-pregnant woman is a far different proposition and depends upon their size, location, rapidity of growth and the symptoms they produce. Small sub-serous tumors that do not manifest any signs of growth can be let alone, but should be kept under observation. This is especially true if the patient is of child-bearing age. All large fibroids extending to within a few inches of the umbilicus, whether they are producing symptoms at the time or not, should be surgically removed. Sooner or later they cause trouble.

The symptoms that require intervention, whether it be surgical or radiotherapy, are those that can be traced to bleeding, pressure, infection and degeneration.

The surgical treatment of uterine myomata resolves itself into a choice of one of three procedures, viz., myomectomy or enucleation of the tumor, supra-vaginal hysterectomy, or amputation of the body through the cervical neck, and complete hysterectomy. Unquestionably each of the three has its field of usefulness. To attempt to go into the details incident to the advantage of the three procedures mentioned would take more time than is allotted me.

For the purpose of placing the indications for each procedure before you in as concrete a summary as possible, I present for your discussion the following:

All small tumors encountered during the performance of a pelvic operation should be removed by myomectomy, unless they are so numerous or deep-seated that this procedure is not practical. Small sub-serous myomata existing in women under 40 located in the upper segment of the body of the uterus, where no offensive discharge exists, can be removed by myomectomy. If there is an offensive or mucopurulent discharge, supra-vaginal hysterectomy is the operation to be chosen. Of course, the ovaries should always be preserved when possible. If the myoma projects through the cervix it can often be brought down and the operation done through the vagina.

Sometimes it is necessary to split the cervix in order to accomplish this.

When the body of the uterus is studded with many myomatous nodules myomectomy is more dangerous than supra-vaginal hysterectomy because hemorrhage is greater and harder to control; adhesions are sure to follow; small nodules may be overlooked and the convalescence is generally stormy.

Supra-vaginal amputation is always indicated in the young woman with the above mentioned condition because the ovaries can be preserved and, if desired, enough of the uterine body to permit menstruation and to ward off an early menopause.

A large myomatous growth in the cervix or lower segment of the uterus is best treated by hysterectomy. In all cases if the ovaries are not badly diseased they should be preserved.

With all that has been said and done about when to operate and when to use radiation in the treatment of fibroids the question still remains one of paramount importance. Personally I feel that a better understanding should exist between the gynecologist and the radium or X-ray expert in the proper selection of cases for either procedure. The time has gone by when statistics are necessary in the defense of either method of cure. Certain facts have been definitely established and surgery and radiation are no longer competing methods of treatment.

Most gynecologists believe that the woman under 40 is not a fit subject for radiation because of the destruction of the sex glands and the premature production of the menopause. I believe this to be true irrespective of the size of the tumor. In a general way we can say that the field for radiotherapy is the woman over 40 who has

fibroids which do not extend to within three inches of the umbilicus. The uterus studded with myomatous growths and very irregular in outline is not a fit subject for radiation. The more uniform the uterine enlargement the better it is adapted to this treatment. The class of cases designated as poor surgical risks are many times better treated by radiotherapy. I refer to cases of marked secondary anaemia in the woman over 40. Prolonged bleeding many times has reduced the hemoglobin to 20 or 25 per cent and made the surgical risk very high. Then again, the woman with cardiac or renal disease and high blood pressure had best be treated by radium or X-ray. The very stout woman or the woman with tuberculosis, either pulmonary or renal, should be treated surgically. All tumors extending to the umbilicus or above, as well as pedunculated fibroids should not be rayed, but treated surgically. This is also true of infected or suppurating tumors and those that are necrotic or gangrenous. Cystic or calcareous degeneration is another indication of surgery. Fibroids complicated by ovarian tumors or infection of the tubes should not be treated by radiotherapy. Rapidly growing fibroids in the woman over 40 should best be treated by radium because of the very likely possibility of sarcomatous degeneration.

My own personal experience in the use of surgery in sarcoma has been anything but gratifying and I am inclined to the belief that radium holds out more hope than surgery.

One of the hardest questions to decide is to the method of choice in fibroids complicated by carcinoma of the body of the uterus. Of fibroids complicated by carcinoma of the cervix, there is but one method of treatment that holds out any ray of hope and it is in radium. I hardly think at the present time I would operate carcinoma of the cervix, whether it was complicated by fibroids or not, but of carcinoma of the body I am inclined to believe I would make a radical hysterectomy and follow it by long and deep X-ray treatments of very high voltage.

Another class I desire to refer to is where the tumor is incarcerated in the pelvic cavity and it encroaches upon the bladder and rectum. The broad ligaments in these cases are almost completely obliterated and it is a difficult matter to adjust clamps so as to control hemorrhages. Here I have seen considerable shrinkage and one case a cure effected by the use of X-ray.

Practically all cervical fibroids should be removed surgically.

DISCUSSION

Roland Skeel, Los Angeles—I find myself under great difficulty. This paper has covered so much ground that I am reminded very strongly of the Chairman's desire to have a symposium next year. I think to discuss this paper in three to five minutes or three to five hours, would be beyond any man. Some twelve or fifteen years ago I was foolish enough to write a paper on fibroids of the uterus, at which time I advocated very radical treatment. Since that time I have modified that stand somewhat and I don't think that anyone could put in a short time anything that he would have to say about fibroids.

When patients come in and are found to have

small fibroid tumors one does not wish to mention it to them as the tumors are symptomless and have no bearing on the patient's condition. On the other hand, a fibroid of considerable size may jeopardize the patient. Either there are hemorrhages, pressure symptoms, especially those upon the ureter or some type of myocarditis with large fibromata.

It seems to me that I can't go on to discuss this. It seems to me that if one discovers small fibroids accidentally in routine examinations, one should not inform the patient about it. If I am asked what to do about it, I tell the patient that a great number of women have the same condition and that it is symptomless. Then a patient comes in with a fibroid that is bleeding. I don't think there is any question about that; I think that it should be treated by super-vaginal amputation of the uterus. I don't think these are cases for radiation, because they have hypertrophy of the endometrium. Those tumors which are submucous and which actually increase the square area of the endometrium need radical operation. Any fibroid which grows rapidly demands radical expedition.

So far as the immediate paper is concerned, I can only say that small subperitoneal tumors should be forgotten and that submucous tumors should always come out. The interstitial fibroids are very well treated with radium, but I think that every time we have to decide between two, three or four methods, the patient should decide upon which she wishes to have. It is up to us to advise and up to the patient to accept. We expect to obtain certain results by certain methods of treatment and it is up to her to say what we should do. We could take all day if we undertook to discuss it.

Walter L. Huggins, Los Angeles—I agree with Dr. Skeel that this paper has covered a great deal of ground. Dr. Gilbert has touched on some very serious points. The first that I wish to speak on is the question of preserving ovaries. A surgeon much more prominent than myself and a member of this Section, I believe, while doing a pan-hysterectomy on a woman thirty years of age, said the ovaries were of no more use. I wish to emphasize, with Dr. Girard, that these cases are amenable to surgery and that at least one ovary should be saved, if not both of them.

In regard to not telling the patient, I have to take exception; I have had an unpleasant experience in that line. A patient came to my office with a general pelvic inflammatory condition following a hard trip through the East. I might say she had tuberculosis for ten years and five years ago had cavities and had been discharged as an arrested case. I did find a small fibroid, perhaps one or one and one-half inches in diameter, which I diagnosed as interstitial. I asked her to report in one month, but she did not come back in a month, but I was sent for a couple of weeks ago because the patient had pains very much like labor pains. She was forty-two years of age, had not menstruated for more than a year, and it took two "hypodermics" to quiet her. I made an examination, found the cervix dilated. I sent her to the hospital and she quieted down. The blood pressure was normal. We used nitrous oxide and oxygen anaesthetic with about one gram of ether given by an expert, but I lost my patient just the same. The fibroid was one of the degenerating type and degenerated more rapidly than any I had ever seen. I had to dissect the cervix to cut it out without doing damage. Had I told her and had I given her more reason for coming back in about a month, I would have had her co-operation and it would have been a different story. In regard to the radiation, it is pretty hard to know just what to say. At the present time I am taking the whole thing with an open mind. I believe that women under forty should certainly have surgery, if possible, instead of the radiation, which destroys the ovary. I believe

they should be given the chance to menstruate if possible. I believe a woman under thirty-five at least should be given a chance to make an attempt at a future pregnancy unless she already has a family.

What I would like to have someone discuss is the following of pan-hysterectomy with radium. I am opposed to the use of radium; I prefer the deep X-ray therapy.

Simply, in closing, I wish to compliment Dr. Gilbert upon the material he has given the Section and I think he has given many of us a good deal of food for thought for the symposiums of next year, and, perhaps, we can thresh it out then.

Stanley W. Dowling, Santa Cruz—There are a couple of points that I wish to make in regard to this paper, and the first is the possibility of overlooking a small fibroid in or along the cervix. I have had to reoperate two cases, both operated by very prominent and competent gynecologists. In both cases the small fibroid was overlooked in the cervix, which caused bleeding later. I think that "toxemia" that is occasionally present in these tumors would perhaps bear a little further study.

I have also seen several cases of myocarditis with comparatively small tumors. If we get this marked myocarditis then it seems to me that there must be some toxic material that is secreted or finds its way into the general system.

Frank R. Girard, San Francisco.—How often do we hear people say, since radium has become such a fad, to be conservative and use radium? It is not conservative, very often more destructive than operation because it destroys the function of the uterus and of the ovaries as well. In the use of radium there is an important point to be considered: the necessity of carefully emptying the bladder. Another danger is the possibility of a small uterus being adherent to the intestines. Now that people are hearing more about treatment of tumors by radium and X-ray, more cases are likely to come into our offices and myomectomy must be considered.

I think any woman over forty years of age, unless there is tuberculosis present, is a case for radium. Under forty, myomectomy or super-vaginal hysterectomy and transplantation of the ovaries is preferable. We hear that the dividing line for treatment of the fibroid uterus usually hinges on the size of the tumor. I think that is rather a poor classification. One may have a large uterus situated deeply in the pelvis where the uterus is sometimes very much larger than it seems. Submucous fibroids and pedunculated fibroids should be operated upon and not treated by radium.

Titian Coffey, Los Angeles.—In the question of fibroids complicating pregnancy, there is the difficulty of making a diagnoses in the early months. I recall a patient a few years ago that had seen a number of surgeons, the case was diagnosed as fibroid and operation was advised. The patient got into the hands of another surgeon who found an abdominal mass that extended well to the navel. As a check-up I was asked to see the patient. I suspected a pregnancy of five months with fibroid. It was quite impossible to make a positive diagnosis at that time and so I advised waiting for a month. At the end of six months we were able to make a diagnosis of pregnancy complicated by fibroids. She was a primipara, forty-two years of age, delivered herself spontaneously and after confinement the size of abdominal tumor was about the size of a four and a half months' pregnancy. Later a hysterectomy was done. When these cases are pregnant and have fibroids the question comes up if they are above the dilatory zone. There is a question whether they are movable. If these cases necessitate a Cesarean Section, my opinion is that if there are multiple fibroids, if possible the organ

should be removed at the time of operation because you take quite a chance in leaving a uterus of that sort in the abdominal cavity.

Dr. Jones, Long Beach.—Right along the line of fibroids I want to report a case of a few weeks ago as to what fibroids will do and if some of you get a case similar it might avoid some little discussion. A few weeks ago a woman had a large tumor which was her only trouble. In opening the abdomen the large tumor, which proved to weigh 17½ pounds, was three fingers below the costal margin, apparently a large homogeneous uterus, pushed between the peritoneum and the pelvic wall. The peritoneum had to be opened and resutured, but it was entirely an intraligamentous fibroid, sub-peritoneal, but the uterus and adnexae could be left intact.

Wm. Henry Gilbert, Los Angeles. Closing.—Knowing Dr. Skeel as well as I do and having a high regard for him, I don't quite grasp his mental attitude toward his patients. I cannot believe that he does not advise his patients as to what he thinks is best for them and what he wants them to do. Dr. Skeel's patients are no different from yours or mine. They consult us because they expect us to carefully examine them and after a diagnosis, to render a decision and such advice as is to their best interest. For that reason I feel that we ought to be able to tell the patient whether the case is one suitable for surgery or radiation. Those of you who have read the literature of this subject will know there has been a great controversy between the men who were doing surgery and those who were doing radiation. This controversy does not continue any longer. There has come out of this chaos of discussion a fairly definite outline of treatment in these cases. We believe that women under forty should not be treated with the X-ray or radium because, as Dr. Girard has said, they are destructive and induce a very rapid and very often a permanent menopause, as well as destructive changes in the sex glands themselves. Furthermore, this question is of vital importance not only to the patient, but to the profession in general, and it is up to us to place it before our patients so that they may be intelligently advised and can act accordingly.

Recently I examined a woman of 28 years of age with a subserous fibroid the size of a walnut. She had been given three X-ray treatments. The menopause was brought on and with it more than her share of the nervous phenomena that goes with it. In fact, so intense were the nervous symptoms that an insanity inquest was to be held. The roentgen specialist who destroyed her sex glands was guilty of bad judgment as is the surgeon who would castrate under the same conditions. Either procedure would accomplish the same bad results and deserves to be condemned.

The size of the tumor many times has nothing to do with the symptoms it produces. A small sub-mucous fibroid that is encroaching upon the uterine cavity and has stretched the endometrium to a point where it is robbed of its epithelial covering may cause great loss of blood while a tumor as large as one's two fists, in a different uterine location, may cause no disturbance at all. Nevertheless every fibroid, no matter how large or how small, is a potential disturber of the peace in the woman's economy and should be so regarded.

There is a common ground upon which the gynecologist and radiologist can stand. The patient is entitled to be placed upon a sure footing, and only by the proper selection of cases for either method of treatment can they be guaranteed all that they are entitled to in the way of results.

POSTERIOR VAGINAL DRAINAGE WITH DESCRIPTION OF NEW INSTRUMENT USED AS A VAGINAL PELVIC GUIDE *

By FRANK R. GIRARD, M. D., San Francisco

It is well recognized that the proper treatment for acute pelvic infections is absolute rest in bed, forced fluids, heat or cold to the abdomen, prolonged hot vaginal saline douches, Fowler position, and a liberal diet. An acute pelvic infection with spreading general peritonitis is the only exception to this rule, when an immediate operation is indicated.

The above outlined treatment is instituted for from two to six weeks or until the pelvic pain has entirely disappeared, the leucocyte count and temperature have been normal for several weeks, and the temperature remains normal after a thorough pelvic examination. After the first pelvic examination, for diagnosis, the patient is not disturbed by further examinations, except where complications develop, until the time arrives to determine whether the case is one suitable for operation or for further palliative treatment.

Under this form of treatment it is most gratifying to see the remarkable change for the better which the patient undergoes. The temperature in a few days drops to normal, or near normal, pain disappears, the leucocyte count drops, appetite and color return, and the patient's whole general condition changes from that of a severely ill and septic woman to one who has her infection well localized and from which there is little or no absorption.

The gonococcus is probably the infecting organism in the greater number of cases of pus tubes or general pelvic peritonitis, which is a more proper diagnosis in the great majority of cases, because the tubes, ovaries, pelvic peritoneum and cellular tissue are, as a rule, all involved.

At operation, in the majority of cases, the pus tubes are quiescent, or of fairly long-standing, and the infecting organism has long since died, especially in the cases of gonorrheal origin, but we must not lose sight of the lesser number of cases due to other organisms than the gonococcus, and capable of retaining their vitality for an indefinite period. We must also realize that in a not inconsiderable number of cases of pelvic trouble the history dates back to an attack of acute appendicitis. At operation the upper abdomen is carefully walled off by gauze-packs from the pelvic cavity, and this must be most thoroughly and carefully done as soon as the peritoneum is opened, because there is nothing more trying and time-consuming than to have intestines insinuating themselves into the operative field, to say nothing of the danger of infection of the upper abdominal cavity from pus spilt in the pelvic cavity, with the patient in the Trendelenburg position.

If omentum and small bowel are adherent to

* Read before the Section on Obstetrics and Gynecology of the Medical Society of California at Yosemite National Park, May 17, 1922.

the posterior surface of the uterus, or to tubo-ovarian masses, they should be carefully loosened and held from the operative field by suitable packs. Tubo-ovarian masses are not infrequently ruptured even by the most expert, while loosening them from the depths of the pelvis, with a consequent escape of pus and, while in a considerable number of cases the pus is sterile, it is always safer to drain per vaginam for a few days. In removing a pus tube it is always preferable to remove a wedge-shape piece of the uterine cornu as well, because if a stump of tube 1 or 2 cm. long is left, it is undoubtedly infected and is capable of continuing the pain and infection, as well as the danger of it becoming adherent to neighboring organs. After careful inspection of loosened tubo-ovarian masses, if possible the uterus and one ovary should be left, especially in young women, and you are all familiar with that most pitiful and distressing type of patient—the woman who has had a total ablation of her genital organs at an early age. If both ovaries, because of damaged blood supply,

layer of the broad ligament and the bladder, which are best drained super-pubically.

The advantages of posterior vaginal drainage are obvious and numerous. To begin with, the highest point of the drain should reach the most dependent part of the area to be drained. This is easily and effectively accomplished by vaginal drainage. Uphill drainage is effective for only a few hours, but gravity will keep up a constant drainage per vagina. The patient is much more comfortable and needs less attention. There is not the long tedious convalescence and discharge of abdominal drainage, with the possibility of a permanent fistula. There is no unsightly scar and weakening of the abdominal wound, with the possibility of post-operative hernia later.

In the past, the usual method of doing posterior vaginal drainage was to have an assistant or nurse insert the fingers or some fairly sharp-pointed instrument into the vagina, and the operator would cut down on the posterior fornix as it was made prominent. This in many cases was unsatisfactory, not to say dangerous. Numerous cases have been reported of injury to the rectum during this maneuver, and Cullen reports two personal cases, one in which the assistant inserted the dressing forceps through the urethra into the bladder and then carried the bladder through the broad ligament and up behind the cervix, and another case in which the assistant inserted the forceps into the rectum.

To make the opening of the posterior fornix a most simple procedure and "fool-proof," I have devised an instrument which will be shown tonight and to which I can find nothing similar in the catalogues of the various instrument houses. It is a clamp approximately 25 cm. long with a double curve, and when closed the end forms an oval ball 3.5 cm. wide and 2.5 cm. high. The anterior surface of the ball is grooved transversely, and this groove the operator feels through the stretched tissues of the posterior fornix and makes his incision directly down on the ball of the instrument, thus avoiding any possibility of injury to the rectum, which is held posteriorly by the lower half of the ball while the back of the cervix is pushed anteriorly by the upper half. If a large opening is desired, a crucial incision can be made at will, using the ball as a guide.

The vagina, in cases where vaginal drainage will possibly be desired, should be cleansed before beginning the operation by scrubbing with green soap and water, washed with a solution of lysol and painted with 2 per cent solution of iodine.

To insert the guide, the sheet over the limbs of the patient is elevated, exposing the labia; the tip of the instrument is dipped into any sterile lubricant or soap solution, although this is not always necessary, and the tip is inserted between the labia just below the urethra. The handle of the instrument is held pen-fashion. The instrument is pressed downward and forward, and the rounded extremity naturally slides along the posterior wall of the vagina, and as the instrument

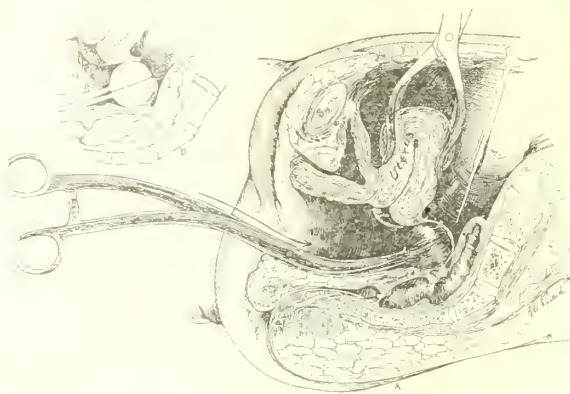


Illustration No. 1

A—Vagina Pelvic Guide in place. Incision being made through posterior fornix from above.

B—Guide presenting in Douglas, pouch ready to receive drain.

extensive denudation of the capsule, or infection, have to be removed, auto-transplantation of small discs of ovarian tissue, not grossly infected, should be made into the abdominal wall while closing the wound.

It often happens that after removing densely adherent masses from the lateral walls of the pelvis and cul-de-sac, denuded areas are left which are incapable of being peritonealized and which ooze excessively, and these cases should also be drained and never abdominally, but vaginally.

Vaginal drainage should be employed in all cases of pelvic surgery where drainage is required, with the exception of those cases of post-puerperal infection of the broad ligament which do not involve the pelvis as a whole, and which are better handled by an incision above Poupart's ligament and an extra peritoneal dissection down to the broad ligament, after the manner of the removal of a stone low down in the ureter, and drainage of the infected area through the inguinal wound; and also those rare cases of abscess between the anterior

is introduced the handles are depressed until they are opposite the vaginal orifice, when the rounded extremity of the instrument will be found by the operator in the posterior fornix and snugly stretching the same. Any nurse can insert the instrument, and there is no possibility of it being inserted either into the urethra or rectum.

After the operator has made his incision, the clamp is opened by the assistant and whatever drainage material it is desired to use is placed between the jaws of the guide and withdrawn into the vagina.

Regarding the material to be used for drainage, various operators prefer either gauze, plain or iodoform, cigarette drains, plain rubber tubing or rubber dam.

The abdomen has an enormous lymph supply, and when drainage is inserted there is a reversal of the lymph stream caused by the presence of the drainage material, which causes the septic products to be washed away along the drainage tract, and if there is enough stimulus for the reversal of the lymph circulation there will be an abundant outpouring of lymph from the local lymphatics which will give a continuous irrigation. When gauze is placed over a raw area the local lymphatics pour lymph into the meshes of the gauze, which is nature's effort to extrude an irritating substance. When the lymph coagulates, the meshes of the gauze become entangled in the wound, and in the effort later to remove the gauze, the delicate tissues of the wound are torn and injury to the granulations and bleeding follows.

Gauze drains will cause more outpouring of lymph than rubber tubing or cigarette drains, which is to be desired, but they have the disadvantage just mentioned. The ideal drainage material is one which will, by its presence, cause a pronounced stimulus to the outpouring of lymph and which will not adhere sufficiently to the wound to injure the delicate endothelial cells underneath.

Such a drainage material has been found, I think, in the use of paraffine gauze, which can be laid in strips between the plain gauze and the wound, or can be used in the form of a casing for a cigarette drain which I have devised, the ends of the paraffine casing being made fan-shape so as to cover any large denuded area which cannot be covered by peritoneum and thus protect the denuded area from becoming adherent to omentum, intestines or adjacent organs and which, when removed five or six days later, will not adhere to the protected area which by that time has become well endothelialized.

A paraffine sterine gauze to be used for this purpose was described by H. E. Fisher in 1916 and later by Bovee in 1919, who used it extensively for pelvic drainage with excellent results. The technique for preparing this gauze, however, is quite complicated, and a lace meshed paraffine gauze prepared by one of the large chemical firms can be used equally well.

This gauze seems rather stiff before being used,

but the heat of the body is sufficient to make it soft and pliable, and it does not adhere to the surface to be protected; it prevents the plain gauze packing from adhering and allows ample drainage through the large meshes, and the patient will more than appreciate the ease with which the drainage is removed.

The after treatment is the same as for other laparotomies, except that the patient is kept in the Fowler position, and where small drains are used they can be removed about the fourth day and at one time. Larger drains can be shortened an inch or so on the fourth day, half of the remaining drain can be removed on the fifth day, and all drainage by the sixth or seventh day.

It is sometimes necessary to dilate somewhat the opening in the posterior fornix if it shows a tendency to close too rapidly with damming back of secretions in the pelvis.

Following the removal of the pelvic drains, irrigation of the sinus is never to be used, and if the

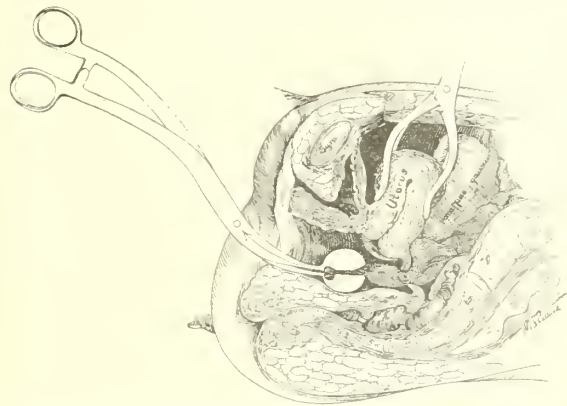


Illustration No. 2

Paraffine gauze being pulled from pelvis into vagina.

discharge is abundant, gentle mopping out with gauze is all that is required to be done.

DISCUSSION

H. A. Stephenson, San Francisco—Without going into the particulars of vaginal drainage, I wish to say that no greater comfort comes to the surgeon sometimes than to feel that he has used drainage even in cases where the infecting organism is not definitely known. We believe that, as a rule, the gonococcus is hardly pathogenic after being in the body for three or four months. In such cases we feel moderately certain that the peritoneum will take care of the infection without drainage. However, it is hard to see at the operating-table whether one has to deal with a mixed infection or with the remains of an old puerperal infection which has lighted up at the time of operation.

There seems to me to be more advantages than disadvantages, therefore, in putting in a drain. The only disadvantage we might have is an occasional fistula. I have not seen this. When one watches the drainage and moves it downward gradually each day, removing it altogether about the eighth day, there should be no danger. This applies to rather severe infections with accumulation of pus in the pelvis. I have not seen any intestinal prolapsus through the vaginal drainage tract. I heartily approve of Dr. Girard's paper, and wish to

congratulate him for bringing this subject to our attention.

Roland Skeel, Los Angeles—I think that for five or ten years now we have swung entirely too far away from the idea of drainage. If we knew every infection were due to gonococci, we might easily get away without it. I want to ask Dr. Girard if he did not mean "damming" instead of draining. Drainage, after all, is not keeping the normal organs out of the way from the surface of the pelvis. I am pleased with his instrument. To keep the intestine from the infected area is the most important thing about drainage. That can be done on the table; running iodoform gauze down and pressing it through the cul-de-sac and then spreading it out until it forms a perfect mat for the intestine to rest upon. It prevents post-operative obstruction many, many times. This instrument seems to take the place of that. The paper is excellent.

James Percy, San Diego—I would like to speak of the kind of material used for drainage. I am always sorry for anyone that uses anything but rubber dam for drainage material. I have used it for ten or twelve years, and I cannot understand why everyone doesn't use it. It does not cost very much, and you can put yards of it in the abdomen without doing harm. I do not care how much fluid there is in the abdomen, the vast majority of patients get well. One factor about the use of rubber dam that was pointed out by Dr. Pope of San Francisco is to be careful to wash off the starch that is put on the ordinary rubber dam. He made this point in reference to rubber gloves. He taught us years ago that in pelvic post-operative adhesions you could find starch right between the two surfaces. I have learned a lot of these things in the gruelling experience of repeated operations upon patients with cancer. These recurrent cancer operations necessitate finding some way to get down into the pelvis without spending one-half or three-quarters of an hour, avoiding the tearing through adhesions. I have reached this by using rubber dam at the first operation, and by removing the starch from my gloves. I have enjoyed the paper very much.

Frank R. Girard (closing)—In answer to the question asked about sterilization of the gauze I use, I want to state that it is easily sterilized. That piece of gauze that I passed around was sterilized four successive days, to see how much sterilization it could stand. You can see that it has not been impaired by being sterilized in an autoclave. It is often used on burns to keep the bottom from sticking to the burned surfaces. I have used it with the same idea to keep the omentum and intestine from adhering to the large denuded areas in the pelvis. Regarding Dr. Skeel's suggestion with reference to the combined damming back or walling off, I think the suggestion is a good one. This gauze does not adhere to the raw surfaces of the pelvis and my assistants have been very much pleased with the ease with which this gauze can be removed as compared with the removal of other material. Dr. Percy's criticism about using rubber dam is answered in my paper. Rubber dam can be used instead of this gauze, but I have explained the advantages of using gauze as compared to rubber dam. I do not agree with Dr. Percy; I think that these cases should not be drained through the abdomen, but should be drained through the vagina. By the use of vaginal drainage, we get a natural drainage and do not keep the patient in the hospital weeks with dressings. Patients get out of bed very often just as soon as any other laparotomy case or one healed by primary union. Furthermore, the patient has not the pain nor the discomfort accompanying abdominal drains, and does not need the attention of the nurses that a larger abdominal drain does. There seem to be many advantages in drainage through the vagina over that of the abdominal route.

THE PIRQUET SYSTEM AND AMERICAN REQUIREMENTS *

By WILLIAM E. CARTER, M. D., Los Angeles

When this subject is brought under discussion a few pertinent questions come to mind:

First—What does the system consist of and wherein does it differ from other systems?

Second—Where and how has it been applied?

Third—Has America met her obligations in the matter of guaranteeing a sufficient nutritional status of her school children by using any other system?

Fourth—Could this system be applied to American conditions?

The first two questions are covered by other papers on this program. At once it becomes apparent that the subject consists of more than another designation for the food unit, "the nem," or another index for indicating the child's nutritional status, "the pelidisi." The system encompasses the basic and all important matter of the actual administration of food to children. Spurred by necessity, the Austrians in particular have applied the system with satisfaction to feeding their child population. Observers in central Europe are invariably impressed with the facility, the efficiency and the economy of the work of the American Relief Administration in applying Pirquet's method.

The answer is obvious to the third question, "Has America met her obligations in the matter of guaranteeing a sufficient nutritional status of her school children by using any other system?" Reports come from all parts of the country that a surprising number of American school children are undernourished. A comparison of the inadequate noonday meal of the American school child and the hot, well-balanced, palatable, midday feeding of the Austrian child affords a considerable reason why American school children show a level of malnutrition almost equal to that found in European children. It may be admitted that other factors, such as the removal of remediable defects, enter into the equation, but after excluding these agents, the observer is impressed with the fact that the administration of an ample noonday ration is very often sufficient to change the undernourished child into a well-nourished one. No, America is not meeting her responsibilities in this direction. There are a few spasmodic attempts being made here and there, in the form of cafeteria lunches, mid-forenoon milk feedings, and the midday meals for tuberculous children; but there are few rational efforts being made to overcome, in a comprehensive way, one of the school child's growth handicaps—namely, the insufficient noonday meal.

The fourth inquiry, "Can the Pirquet system be applied to America's problem?" requires some detailed consideration. The accuracy of the "pelidisi" as an index to the nutritional status has been questioned by some very competent observers. In this connection it may be said that the Wood's

* Read before the Section on Pediatrics of the California Medical Society, Yosemite National Park, May 16, 1922.

tables, in common use, are defective and that so far, no mathematical formula has been devised which is truly accurate and which is applicable to all persons. The individual variation can not be calculated by rule. But after making physical examination of several thousand children in this country and abroad and comparing their physical status with their nutritional index, the "pelidisi," the writer is impressed with the practicability of the scheme. There is a strikingly constant relationship between the "pelidisi" and the physical findings, which latter Pirquet symbolizes with the phrase "sacratama." For all practical purposes, the "pelidisi" affords an effectual working rule.

The "sacratama" is very acceptable both in clinic and in office, but particularly is it useful when examining large numbers of children and making a record of the findings. At first blush it may appear confusing, but in actual operation it is simplicity itself. As to the unit of food measurement, the "nem," the writer believes it is much simpler and more comprehensible to the uninitiated, and that it is just as accurate as a unit of measurement as is the calorie. However, the fact that the calorie is already fairly well established in American usage may make the substitution of the "nem" difficult and undesirable.

It appears that the Pirquet system can be applied, with appropriate modifications, to American conditions. The exigencies of war no longer exist and the attitude of the people would not permit the strict disciplinary measures, applied abroad, which are inherent in this method. But it should not be forgotten that the outstanding feature of the system is the fact that children are fed a well-balanced, sufficient, midday ration, and that their weight curves bear eloquent testimony to its effectiveness. In America there is an abundance of food, and facilities for the feeding of school children in a comprehensive way could be developed readily. The dairy lunch rooms which serve food prepared at a central kitchen may give us an illustration how the thing may be done. Materials could be bought at wholesale prices, the recipes and menus could be provided by dieticians on physician's prescriptions, and the food could be cooked in central kitchens. From these kitchens it could be delivered hot, in double-walled containers, to the schools and there dispensed by volunteers or even by paid assistants. The cost of a meal so prepared would be less than that at which the mother could provide the food herself. It is to be hoped that those interested in school feeding programs may be able to do as much for our own children in this respect as has been done for the children of central Europe.

SUMMARY

American school children show a startling percentage of malnutrition. The well-balanced mid-day meal, properly administered, has been proved to be helpful. Our present haphazard methods of feeding school children are not entirely satisfactory in producing a general improvement. There should be little difficulty in applying a modified Pirquet system.

(942 South Alvarado Street)

THE USE OF THE PUPILLOSCOPE IN NEUROLOGY *

By H. G. MEHRTEHS, M. D., and OTTO BARKAN, M. D.,
San Francisco

The Argyll-Robertson pupil has for many years been considered almost pathognomonic for neurosyphilis. True, of late years some questions have been raised as to the possibility of other conditions, viz., trauma and encephalitis, simulating that phenomenon. Its usefulness as a sign was considerably impaired by the lack of a standard method of eliciting the sign. It is well-known that the results of examinations by different clinicians of the same case will contain such misleading statements as "sluggish," "doubtful," "normal," "present" or "questionable." It also was impossible to register the degree of pupillary involvement so that it could be compared at some future time with a repeated reading.

In the Differential Pupilloscope of Von Hess all sources of error have been eliminated and a very exact quantitative method inaugurated. The aim of the instrument is to determine the sensibility of the pupil to successive differences of light. The patient's eye is observed through a telescope of eight magnifications. From a constant source of illumination a beam of light is cast upon the eye. This beam of light is made to traverse a frame which consists of two compartments. The upper compartment contains a gray glass of known permeability to light. The lower contains two gray prisms which are calibrated and can be superimposed, one on the other, to any desired extent, by means of a micrometer screw. The amount of light passing through the lower compartment is varied by changing the position of the prism. The frame is then swung up and down so that the beam of light passes successively through the upper and the lower compartments. When the permeability of the compartments is equal we are illuminating the eye with a constant beam of light. By changing the permeability of the lower compartment it is in our power to illuminate the eye with any desired difference of light. We now determine the least difference of light which just suffices to elicit reaction of the pupil and this difference of light is a numerical index of the sensibility of the pupil and, therefore, of the pupillary reflex arc. The prisms are most permeable to light at their apices and least at their bases so that the permeability of the systems of prisms varies according to the positions of the superimposed portions. The position of the prisms and the amount of light passing through are shown on the micrometer scale and we can thus measure accurately the amount of light necessary to secure reactivity of the pupil. The smallest difference of light intensities between which the normal pupil can distinguish is as 95 to 100. The value is constant, is irrespective of the age of the individual and is independent of the state of adaptation. The lowest limit of the physiological index is 0.88. Diminution of the index to 0.86 is definitely pathological, but a pupillary lesion of

* Read before the Neuropsychiatry Section of the State Medical Society meeting, Yosemite Park, May 16, 1922.

such small degree is not detectible by any other methods.

The pupilloscope findings were recorded in 108 cases. The material was taken from the Neurological Clinic of Stanford University Medical School and was, therefore, richer in positive findings than would be expected in the general run of syphilitic patients. Nearly every case examined had some subjective neurological symptom which raised a question that a central nervous lesion might be a possibility.

We divided the material into four divisions: Cases showing a positive blood Wassermann without any spinal fluid involvement, active cerebro-spinal syphilis, neuro-syphilis without meningeal reaction and cases without meningeal reaction which, because of some symptoms, might conceivably have had a syphilitic lesion at some previous time.

1. Of the first type of cases, showing a positive blood Wassermann without any spinal fluid involvement, we had twenty-five of whom we could not be certain from the neurological examination that any central nervous system involvement had occurred. Ten, or 38 per cent, showed a positive Argyll-Robertson pupil. Five of these, or 50 per cent of the number of positive cases, did not show any clinical symptoms suggesting a central nervous system involvement. These findings raised the question: How accurate an indicator is the spinal fluid of the activity of neuro-syphilis? It would seem possible that an involvement of the central nervous system had occurred at some previous time in their history, perhaps at the time of the secondary lesions, but later, as the result of natural immunity, became arrested or cured. On the other hand, it is uncertain that one negative lumbar puncture may not give us an absolute guarantee of the absence of neuro-syphilis involvement, the negative result being only a temporary remission in a continuous process. At any rate, it may well have been that the subjective complaints of these patients, which could not be verified by other neurological findings, or even by the ordinary methods of testing for Argyll-Robertson pupils, may be due to a burnt-out or arrested neuro-syphilis.

2. In active neuro-syphilis, the Argyll-Robertson pupil occurred in twenty-three cases out of thirty, or in 77 per cent of the cases. This frequency was very much what we would expect it to be, although it is always well to bear in mind that in this group we have patients who have definite evidence of syphilitic involvement in their spinal fluid, have the subjective symptoms and some of the objective signs, and yet do not have the Argyll-Robertson pupil elicited either by our ordinary clinical methods or by the pupilloscope.

3. The third type of case studied was neuro-syphilis without meningeal reaction. In this group we had a surprisingly large percentage of positive Argyll-Robertson pupils; twenty out of twenty-five cases, or 80 per cent.

The group consisted of nine cases which had apparently been arrested spontaneously and sixteen

in which an arrest had been secured by means of therapy. In both types the disease had progressed far enough so that the percentage of Argyll-Robertson pupils was high. It is interesting to note that those arrested by natural means had progressed further than those arrested by means of therapy.

The use of the pupilloscope in this group was of special interest in that the cerebro-spinal fluid was normal and would not give us our most decisive diagnostic evidence.

4. The fourth group consisted of cases with negative blood and spinal fluid, some diagnosed as encephalitis and some of doubtful diagnosis. Every case in this group had some symptom or sign which tended to bring up the question of neuro-syphilis at least as a point of differential diagnosis. Of this number, seven cases of Argyll-Robertson pupils occurred, or nearly 26 per cent. This finding was of special importance in this group as without it a diagnosis could not have been made.

Of almost equal importance was the percentages that we find negative, as these negative findings tended to head the diagnoses in other direction. There were nine cases of encephalitis, most of whom had a typical history and physical findings, not one of whom showed an Argyll-Robertson pupil. Seven (77 per cent) showed an ophthalmoplegia-interna, two showed no eye findings whatever. These findings were interesting in that some observers (particularly Waardenburg) would consider an Argyll-Robertson pupil as occurring in encephalitis. As a diagnostic point, an Argyll-Robertson pupil would, in our experience, argue for neuro-syphilis and never for an encephalitis.

In comparing the delicacy of the pupilloscope findings with the ordinary clinical tests, we may say that of the whole number of cases, thirty-nine, or 63 per cent, were diagnosed by the ordinary methods as Argyll-Robertson pupils. The pupilloscope enabled us to diagnose 34 per cent in addition. It also definitely disproved an Argyll-Robertson pupil in 66 per cent of doubtful cases.

CONCLUSIONS

From the above discussion the following conclusions may be drawn:

1. The pupilloscope will in no way replace the usual diagnostic methods in the determination of the ordinary Argyll-Robertson pupil.

2. Its maximum usefulness will be found in doubtful central nervous system involvement, especially when the pupillary reaction is ordinarily described as doubtful or sluggish. It may here be the means of making a diagnosis of neuro-syphilis without recourse to lumbar puncture.

3. In no case has an Argyll-Robertson pupil been found in encephalitis by the pupilloscope. Either the pupil was normal or we found an ophthalmoplegia-interna.

4. In a research way it may be the means of clearing up such problems as the comparative reliability of a positive spinal fluid or beginning Argyll-Robertson, as to prognosis, or the desirability of therapy directed toward neuro-syphilis.

(Preliminary report of research carried on with the financial aid of the United States Government Interdepartmental Social Hygiene Board, Stanford University Medical School, Department of Neuro-psychiatry.)

TUMORS OF THE BREAST ARISING DURING PREGNANCY AND LACTATION.*

By A. R. KILGORE, M. D., San Francisco
(From the Surgical Pathology Laboratory, Johns Hopkins Hospital, and the Surgical Service, University of California Hospital)

This paper is a report of an interesting study of the tumors of the breast arising in connection with functional activity of the organ, made upon a series of 1500 cases of breast lesions. Such a study has not, to my knowledge, been previously made, other studies having been limited to a consideration of the relation of lactation to the development, later in life, of breast cancer.

The work was done at the suggestion of Dr. Joseph Colt Bloodgood and the material studied is that contained in the records of his laboratory at the Johns Hopkins Hospital, supplemented by a number from the University of California Hospital. Table 1 shows the number of cases of each type of tumor arising in connection with lactation or pregnancy. Thus, of a total of 1099 cancers, 49 or 4.45 per cent arose during breast activity. These 1099 cancers, however, include those arising at all ages, and as cancer is a disease of advanced life, many had their incidence after the menopause. If one considers only the cases of cancer arising during the child-bearing period, it appears that 10 per cent arise during pregnancy or lactation.

Cancer appears as the most frequent of all breast tumors during pregnancy and lactation, as well as at other times. The order of frequency, however, of certain benign conditions changes materially during breast activity. Reference to the table shows that, as would be expected, nearly 70 per cent of galactoceles, or milk cysts, arise in connection with breast activity. Over 25 per cent of breast tuberculosis also arises during pregnancy or lactation—no doubt owing to the lighting of unrecognized foci in the breast by the increased circulation incident to function. In lactation and pregnancy, cancer, galactocoele, tuberculosis and adenomata comprise over 90 per cent of the tumors, *in the order of frequency named*. At other times than during functional activity, chronic cystic mastitis in its tumor-like forms takes the place of both galactocoele and tuberculosis in order of frequency. (Chronic cystic mastitis has been omitted from the table because from the very nature of the condition, no cases had their origin during functional activity of the organ.)

Age of Patient in Differential Diagnosis—Studies of the ages of patients at onset of the various tumors in this series show the incidence for all tumors to be distributed over the entire child-bearing period. Only in a very general way is the age of onset helpful in differential diagnosis. 93 per cent of the cancers arose after the age of thirty, while 68 per cent of the benign tumors arose under this age. As a broad generalization, therefore, tumors arising during breast activity under thirty years of age are more likely to be benign, over thirty more likely to be malignant.

Stage of Pregnancy or Lactation—In the same way it was found that the incidence of both cancer and benign tumors is distributed fairly evenly over the various stages of pregnancy and lactation. The point of practical significance in this connection is that at no time during pregnancy or lactation can cancer be ruled out in the differential diagnosis. During the early months of lactation, most lumps in the breast are inflammatory, yet in this series, 20 per cent of all pregnancy and lactation cancers were first noted during the beginning four months of lactation. It is not safe to delay too long exploring a lump in early lactation on the assumption that it is inflammatory.

Cancer Incidence—Most interesting of all aspects of this subject is the question of the relation of breast activity to cancer. It is fairly well established that previous normal lactation does not render a woman more likely to develop breast cancer in later life than the woman who has never lactated. But it is not so clear whether or not cancer is more likely to develop during a year and a half of pregnancy and lactation than it is during the same length of time at the same age when the breast function is dormant.

For the study of this point Table 2 has been made. First, the proportion of women at various ages who were pregnant or lactating at any given time throughout the Registration Area of the United States was ascertained from the birth statistics of the Census Bureau.¹ The first column shows the cases of cancer which would be expected to develop in these women if the rate of incidence during pregnancy and lactation were the same as at other times. The second column shows the actual number of cases of pregnancy and lactation cancer in the Registration Area estimated from the cases here studied, together with statistics contained in the Census Mortality Reports.² Even allowing for inaccuracies due to the relatively small number of cases in this series, the increase of estimated actual incidence over expected incidence is striking. An even more extraordinary picture is obtained, however, when study is made of the liability to cancer during pregnancy and lactation according to age groups, i. e., does advancing age increase the liability to cancer more during pregnancy and lactation than it does at other times? Table 3 has been compiled to answer these questions. The first column shows the total cases of breast cancer in the Registration Area per 100,000 female population in each age group. The second column represents in the same way, cases per hundred thousand pregnant and lactating women in the Registration Area, based upon the figures of this series.² As shown, the number of cases of cancer *per hundred thousand pregnant or lactating women*

¹ A liberal estimate of the average duration of pregnancy and lactation is eighteen months (1½ years). The number of women pregnant or lactating in any one year is taken, therefore, as one and one-half times the number of births.

² The total number of cancers in this series is approximately one-fifth of the annual cancer mortality in the Registration Area. Assuming the ratio of lactation cancer to total cancer in this series to be the same as that in the Registration Area, total lactation cancer was estimated by multiplying the lactation cancer in this series by five.

* Read before the Section on Surgery of the Medical Society of California at Yosemite National Park, May 16, 1922.

increases markedly after the age group 35 to 39 over the number of cases of cancer per hundred thousand women not pregnant or lactating. The deduction to be made, therefore, from Tables 2 and 3 is that cancer of the breast is more likely rather than less likely to occur during lactation and pregnancy than at other times, and that this greater likelihood of cancer in pregnancy and lactation increases strikingly after the age group 35 to 39 is passed.

No one realizes more than myself the danger of attempting to draw final deductions from statistics involving a comparatively few cases, but I find justification in calling attention to this apparent result in two considerations: first, the very striking increase shown in the second column of Table 3—so striking that its form would still be apparent even with considerable variations; second, the fact that the series of breast cases (1500) from which our fifty cases of lactation cancer were drawn is, with one possible exception, the largest series of cases with accurate histories available for such study.

Prognosis of Cancer in Lactation—This paper would not be complete without mention of the prognosis of cancer during breast activity as illustrated in the series studied. Forty-five of the forty-nine cases were traced five years or more after operation and of this number six were well when last heard from, i. e., 13 per cent (unselected) proved to be five-year cures—not as high as the percentage of cures in unselected cases of breast cancer generally, but indicating, as cancer statistics go, a far from hopeless prognosis for malignant disease arising in connection with breast activity.

TABLE I

To show for each Tumor the Percentage of Cases Arising During Pregnancy or Lactation		Percentage of Cases	
	Total Arising at all times	Arising in Pregnancy or Lact.	Percent Arising in Pregnancy or Lact.
Cancer	1099	49	4.45%
Cancer (including only cases under 47 years)...	(49)	(49)	10.
Galaetocoele	19	13	68.4
Tuberculosis	34	9	26.4
Adeno-fibroma	285	9	3.1
Miscellaneous	74	6	0.
Totals	1511	86	5.7 %

TABLE II

Comparison of Expected and Actual Incidence of Cancer in Lactation in the Registration Area

Age-group	Expected Incidence (if rate during breast activity remained the same as at other times)	Actual Incidence (estimated from figures of our series; Note 2)
15-29	9.	15
30-34	16.	47
35-39	34.	35
40-44	20.	75
45-49	3.4	26

TABLE III

Comparison of Increase with Advancing Age of Cancer in Lactation and at Other Times

Age-group	Total Breast Cancer per 100,000 females at each age group	Lactation Cancer per 100,000 Pregnant and Lactating women at each age group
25-29	1.7	3
30-34	4.4	21
35-39	14.3	14.5
40-44	25.	93
45-49	43.	312

ADENOMATA OF THE THYROID *

By JOHN HUNT SHEPARD, M. D., San Jose, Cal.

On account of the indefinite and unscientific terminology of thyroid pathology it is often difficult, and at times impossible, to intelligently compare the opinions of different writers on thyroid disorders.

In 1912, after an exhaustive study of 2500 freshly removed thyroids, McCarty made this significant statement: "This brief academic review is but a confession of our limited scientific knowledge of the thyroid and its pathological condition which we know as goiter." At that time he suggested the use of a descriptive key which he has since followed in reporting the pathology of thyroids operated on at the Mayo Clinic. While such a descriptive key may not satisfy those who believe the pathologist must always render a definite diagnosis, it has been of great value to the clinician in correlating the clinical and pathological pictures, and until tissue changes corresponding to the varied clinical syndromes can be recognized, much confusion will be averted if both the pathologist and the clinician will confine themselves to simple descriptive terms when referring to thyroid disorders.

H. S. Plummer, in 1911, in discussing a paper by Marine, called attention to the fact that there are two definite types of hyperthyroidism. One accompanied by a diffuse parenchymatous hypertrophy and hyperplasia, the other accompanied by adenomas without parenchymatous changes. The clinical picture of the first was described by Graves, Basedow and others and for years has been more or less accurately recognized, but hyperthyroidism due to adenomas is frequently overlooked. The two types of hyperthyroidism have been aptly compared to acute and chronic alcoholism, and to add to the complexity of the problem, acute parenchymatous hypertrophy may develop in an adenomatous thyroid. At present we are unable to recognize constant and characteristic tissue changes in adenomatous thyroids indicative of a hyperthyroid state, while the diffuse hypertrophic and hyperplastic thyroid is always accompanied by hyperthyroidism and within certain limits the degree of intoxication can be told from the pathological picture.

Kocher believed that adenomas had their origin in colloid goiters, on account of the frequency that one obtains a history of colloid goiter in earlier life. However, adenomas are frequently seen when no such history is obtainable. The oft-time presence of fetal rests in apparently normal thyroids and the character of the cells in adenomas strongly favor the opinion that they originate from embryonal cells. Unless accompanied by intra-adenomatous hemorrhage, adenomas are usually of slow growth. Attaining a recognizable size at the average age of twenty-three means that proliferation began several years earlier, at about the age when colloid goiters are most prone to occur. May it not be that the same stimulus which causes the thyroid cells to produce an excess

* Read before the Section on General Surgery of the Medical Society of California, Yosemite, May 18, 1922.

of colloid causes the fetal rests to enter on a life of proliferation? There is ample evidence to justify one in the belief that a colloid goiter is the result of an overactivity of the thyroid gland, in its attempt to satisfy the demand of the tissue cells of the body for thyroxin, in an individual deficient in the available supply of some of the constituents from which thyroxin is elaborated and this overactivity under such conditions results in an excessive production of colloid. The stimulus which later fires these adenomas to become toxic at an average of fifteen years after their discovery, is more obscure.

Though only twenty-seven per cent of the adenomas coming to operation are toxic, their size is of little consequence so far as their production of hyperthyroidism is concerned. Many large multiple adenomas never produce symptoms, while a relatively small substernal one may cause an unrecognized thyrotoxic death.

Hyperthyroidism, due to adenomas, is most insidious in its onset. Rarely does the patient notice any marked change in the size of the goiter; medical advice is usually sought on account of one or more of the following symptoms: 1. Shortness of breath on exertion. 2. Palpitation. 3. Failing endurance. 4. Increased irritability. 5. Decreasing power of concentration. 6. Excessive warmth and moisture of the skin with a tendency to excessive perspiration. 7. Loss of weight in the presence of a normal or increased food consumption.

No definite date of the onset of the symptoms can be given. They are often attributed to increased social duties, business worries, lack of proper exercise, too heavy smoking, domestic difficulties, or what not, and patients are often loath to believe that the goiter, to which they have long since become accustomed, is the causative agent. When seen in a more advanced state marked nervousness, tremor and weakness are usually the chief complaint. Evidence of cardiac insufficiency and myocardial degeneration are unmistakable proofs of a long-standing intoxication. Exophthalmos and thrills and bruits over the thyroid vessels, so frequent in hyperthyroidism due to diffuse parenchymatous hypertrophy and hyperplasia, are absent in adenomatous hyperthyroidism. The characteristic cycles of improvement followed by relapses so common in Graves' disease are of rare occurrence in Plummer's disease.

A careful analysis of the onset, course and termination of these cases reveals what one might expect when viewed from the standpoint of increased metabolism. The normal sequence of work and tissue decay followed by rest and rebuilding no longer prevails. To maintain the increased burn taking place in the tissue cells throughout the twenty-four hours of the day the heart is called upon to furnish a per minute output of blood during the normal period of rest equivalent to, and in severe cases in excess of, the requirements of a healthy individual doing moderately active labor. During the hours of activity the heart, in addition to maintaining the high basal level, must increase

its output to care for the increased muscular action. The result is an early cardiac hypertrophy followed by myocardial degeneration and dilatation. Broken compensation follows which may so dominate the clinical picture that the exciting cause escapes recognition. The increased irritability, mental excitement, nervousness and tremor are similar to the conditions observed in athletes at the close of prolonged strenuous contests or soldiers on forced marches and are more rationally explained on the ground of excessive cell catabolism than on the assumption of the presence of some specific thyroid toxin.

Plummer, in 1915, showed that there is a definite tendency toward hypertension in adenomas both with and without hyperthyroidism, while in Graves' disease there is a relatively open periphery. This tendency toward hypertension no doubt has its effect on the myocardium, and nowhere do we see more pronounced auricular fibrillation than in certain cases of toxic adenomas.

The degree of intoxication, as measured by the metabolic rate, is easily underestimated unless one bears in mind that adenomatous hyperthyroidism is a chronic, relatively low grade intoxication. Too much emphasis must not be placed on the basal metabolic rate as a deciding factor for or against operation. While as a general rule, a patient with a plus 40 is not a good risk for a primary thyroidectomy, yet one patient with a plus 50 may be a better operative risk than another with a plus 25. The basal metabolic rate is but one factor in the equation. It tells us the size of the load the patient is carrying but gives us no information as to the patient's ability to carry that load, which is the essential thing to know. Every factor bearing on the case must be considered; the duration of the trouble; the rapidity of the advancing intoxication; the degree and rapidity of weight loss; the fluctuation of the pulse rate under slight stimulation; the nervous stability of the individual, all have a definite bearing in determining the ease with which the load is being carried. One important factor in determining the patient's ability to withstand operative procedure is the relation between the basal metabolic rate, pulse pressure and pulse rate. To maintain an increased basal metabolic rate there must be an increased per minute output of the heart which can be accomplished either by increasing the output per beat or increasing the number of beats per minute; a strong myocardium will increase the output per beat, a weakened myocardium will increase the beats per minute. Thus, generally speaking, given two patients with the same metabolic rate, the one showing a relatively high pulse pressure and a relatively low pulse rate is a better surgical risk than the one with a relatively low pulse pressure and a relatively high pulse rate.

For years iodine has been a strong favorite in the treatment of goiters, and if the goiter be a colloid goiter iodine will usually effect a cure. Likewise, as Marine has shown, small doses of iodine given to school children will greatly decrease the number developing colloid goiter. But in the use of iodine

therapy an unmodified diagnosis of goiter is insufficient. The application of iodine to the neck or the internal administration of iodine compounds has often been the exciting stimulus which has transformed a non-toxic into a toxic adenoma.

Many thyroids containing adenomas have decreased in size under iodine therapy, but when such has occurred they have been cases of adenomas in a colloid thyroid. True adenomas do not yield to iodine therapy. Though occasionally one hears of an adenomatous thyroid successfully treated by X-ray, radium, iodine, osteopathy or Christian Science, a careful search of the medical literature reveals no series cured by any other means than surgery, and in no pathological condition can we promise a higher percentage of success. Should we advise operation when the adenoma is first discovered? No. Should we wait for the appearance of hyperthyroidism? No. When, then, should adenomas be removed? Adenomas may be single, though usually they are multiple. Their rate of growth varies. If we follow the practice of operating as soon as an adenoma is discovered, many minute ones will be overlooked, which will continue to grow, necessitating a second operation. Since less than thirty per cent of the adenomas coming to operation are thyrotoxic it might seem proper to await the development of early symptoms of hyperthyroidism. While this is an ultra-conservative position, it is justifiable provided the profession learns to recognize the early symptoms and insists upon operative treatment before serious cardiac damage develops.

The mortality in the operative treatment of non-toxic adenomas is less than four-tenths per cent. In toxic adenomas it depends upon the degree of myocardial degeneration present. The bad risks mixed with the good give an operative mortality of approximately two per cent. If we believe it is good judgement to advise a patient with a non-toxic adenoma to voluntarily assume a risk slightly less than four-tenths per cent in order to escape a twenty-seven per cent risk of the adenoma becoming toxic, the proper time to advise operation is three to five years after discovery of the growth. At this time it is probable that any adenomas present will be large enough to be found at operation and recurrences will be few. Only in rare cases will hyperthyroidism have developed at this time and unless definite toxic symptoms have appeared, in which case thyroidectomy should be performed on the appearance of the first symptoms, no permanent cardiac damage will result. By following this course we early relieve our patients of an unsightly growth, and forestall the development of mechanical and toxic symptoms.

The type of operation depends upon the size and number of adenomas present. In the solitary and well encapsulated form enucleation is all that is required and occasionally this may be done with multiple growths. However, usually one or more large and many small adenomas are present and a bilateral subtotal thyroidectomy must be done. The numerous enlarged thin-walled lateral veins are often a source of great annoyance and free

exposure is the best insurance against serious hemorrhage. The transverse division, between properly applied clamps, of the sterno-hyoid and sterno-thyroid muscles on one or both sides does not affect the period of convalescence or the end result and adds much to one's exposure. Unlike a thyroidectomy for the cure of Graves' disease in which we plan to leave thyroid tissue equal to about one-fourth the normal gland, in an adenomatous thyroid we leave all the parenchymatous tissue we can. In cases of large multiple adenomas, through pressure necrosis, the amount of normal thyroid tissue may be greatly reduced and though it is surprising how small an amount will prevent the development of post-operative myxedema, care should be exercised and small portions saved which in other cases could be freely sacrificed. If a general anaesthetic is used, it is highly desirable that the patient should be carried in a very light state of anaesthesia so that before the muscles are closed some coughing or retching may be provoked. These acts cause a venous engorgement of the field of operation, and not infrequently reveal an open vein, which if undiscovered might lead to serious post-operative hemorrhage.

That the systemic symptoms in toxic adenoma are due to a true hyperthyroidism is proven by the metabolic rate determination taken before and after operation. As reported by Boothby, the metabolic rate within two weeks following thyroidectomy drops to a plus 30 in 8 per cent of the patients, to a plus 20 in 12 per cent; to a plus 15 in 13 per cent and to normal in 67 per cent. This is proof that patients suffering from hyperthyroidism due to adenomas are almost immediately cured by thyroidectomy and recurrence occurs only in the event of the development of new adenomas.

The patient who has suffered long from this chronic type of hyperthyroidism, in consequence of which there has developed a severe myocarditis with pronounced auricular fibrillation, may on first examination appear to be such a poor surgical risk that operation is not to be considered. These are the cases which constitute the majority of deaths occurring during the first week following thyroidectomy. If these patients are to be saved desperate chances must at times be taken. However, if under rest in bed, morphine and heavy doses of digitalis, the edema disappears, otherwise hopeless patients may withstand operation and the improvement which follows is oftentimes most striking. While the severely damaged heart can never be made sound, many will be given one to ten years of a comfortable though perhaps not an active life.

CONCLUSIONS

1. The terminology of goiter at the present time is confusing, and until the pathological and clinical findings are more definitely correlated the use of a descriptive key as suggested by McCarty seems advisable.

2. Hyperthyroidism due to adenomas is a distinct entity to be differentiated from hyperthyroidism due to Graves' disease.

3. The pathologist, at present, is unable to

distinguish between an adenoma causing hyperthyroidism and one not causing hyperthyroidism.

4. The average time elapsing between the discovery of an adenoma and the appearance of the symptoms of hyperthyroidism is 15 years.

5. Iodine therapy, of marked benefit in the treatment of colloid goiter, is not only worthless but actually dangerous in adenomas.

6. Enucleation or subtotal thyroidectomy performed before serious myocardial damage has occurred is the rational treatment, and can be relied upon to effect a cure in practically one hundred per cent of the patients.

7. Operation should not be advised except for the relief of toxic or mechanical symptoms or cosmetic effects within three to five years after the discovery of the adenoma.

Is Public Health a "Merry-Go-Round"?—In recent years the people as a whole have come to take a decided interest in matters pertaining to health. This interest has continued to increase until innumerable so-called voluntary health organizations have sprung up and continue to multiply all over the country. Anti-tubercular, anti-venereal, child welfare, maternal welfare, family welfare, baby welfare—in fact, a more or less free fare and invitation to every one to join one of these groups on the free road to health. The prenatal clinic cares for the baby in the mother's womb and guides it into a hostile world. It is received in the motherly lap of the baby welfare clinic and tenderly cared for. It receives its nourishment from the warm and hygienic bottle prepared in the baby milk laboratory. Its tottering steps are guided by the helping hand of the child-welfare society. In due time the child enters school and he is welcomed on the threshold by the school nurse and introduced to the school physician. He is vaccinated against smallpox, inoculated against typhoid, is given the Schick test and becomes immune to diphtheria. His teeth are looked after at the dental clinic, and his tonsils and adenoids removed at some hospital out-patient department. His eyes are examined and possibly fitted to glasses, and thus equipped and prepared he at once starts to do his health chores. Found underweight, he enjoys for a time the luxury of an open-air school under the supervision of the nurse and physician of an anti-tubercular association. Thus he is guided through school and may take a chance at college. If he here escapes for a moment from his guardians and falls into evil ways there are free clinics provided even for these emergencies.

Safely passing his health inspection and eugenic society wedlock is entered. In due time his wife becomes an attendant of the maternal welfare clinic. His health is guarded by his periodic health examinations. He is looked after at his work by the industrial nurse and prescribed for by the industrial physician. If sick at home he has the care of the visiting nurse and the social worker. His future is provided for by his industrial insurance and old age pension. In his declining years he enters some rest home for the aged. His dying pillow is smoothed by the institution nurse and his room brightened by the home visitor. Some burial society looks after his funeral. At last he lies at rest after a long and pleasant journey along the free health road. Even heaven has been made secure, and the ministering angels will continue to guard him through all eternity. An ideal to strive for, a pleasant journey. We wish him well.—Maine Medical Journal.

POST-TONSILLECTOMY PULMONARY ABSCESS *

By MARY E. BOTSFORD, M. D., San Francisco

Is anesthesia responsible for the increase in the number of post-tonsillectomy pulmonary abscesses reported in the medical press? A famous attorney has spoken of the anesthetist as the accessory before the crime and the burden of proof may often, as in the present discussion, rest upon us.

Oral surgery represents a large proportion of the operative procedures of today and if the apparent increase in the number of pulmonary abscesses following them be due to the anesthetic per se, then it behooves us to seek the remedy, either in a perfected technique or in recommending the substitution of local for general anesthesia in a larger percentage of cases.

Briefly stated, the chief causes considered by the various observers are divided into antecedent and operative. The former, those due to pre-existing, local or general conditions, such as tuberculosis, etc., and the latter, directly due to the surgical procedure. The first of these, while being recognized as a possible factor, is generally considered to be infrequent, because of the usual routine physical examination and the fact that tonsillectomy, being an operation of selection, is rarely done except with the patient in favorable physical condition.

In these cases, the role of the anesthetic and the question of its choice would depend upon the general condition.

The earlier investigators lay much stress on the possibility of severed veins remaining patulous following the operation and permitting the entrance of septic blood clots. Their argument is based on the close association of the tonsillar area with the lung through the lymphatic and vascular circulation, and the opportunity for pathogenic bacteria, liberated during the operation, being forced into the circulation. The embolic origin through the diaphragm of many of the so-called post-operative ether pneumonias, has been definitely proved in cases of septic abdomen and undoubtedly infected emboli may travel to the lungs from above downward.

A review of the literature, covering a period of eight years, tends to align all observers who favor the operative causation into two groups—those who hold that metastatic emboli are the cause and those who give precedence to the aspiration theory. If the former were demonstrably correct, anesthesia might be acquitted, but as a matter of fact the preponderance of evidence favors the latter theory, and its proponents are largely in the majority.

L. Fisher and A. J. Cohen, (1) in the Section on Laryngology, Otology and Rhinology, at the last session of the American Medical Association, in reporting seventy-six post-operative pulmonary complications, seventy-two occurring in adults, concluded from the study of these cases—seventy-four of the number having been operated under general anesthesia—that the most probable cause (while

* Presented to Section on Anesthesiology, California State Medical Society, Yosemite, May 15, 1922.

admitting the feasibility of direct aspiration) is the introduction through the lymph or vascular channels of infected emboli. They offer as a solution the substitution of local for general anesthesia in all adults.

E. C. Cutler (2) bases his argument in favor of embolic origin of all pulmonary post-operative complications mainly on the fact of their occurrence under local as well as general anesthesia.

C. W. Richardson (3) states that although at one time of the opinion that the causes of lung abscesses are embolic, either vascular or lymphatic, he now believes that if not entirely, they are in part due to the aspiration of septic material, which is squeezed out of the tonsil at the time of operation.

A. H. Herr (4) considers that abscess of the lung after tonsillectomy is rarely due to metastasis, but to aspiration of septic material.

Willy Meyer says (5) "It is my belief that almost every case of sub-acute lung suppuration is due to aspiration of either solid, semi-solid or fluid material; also that abscess formation following pneumonia is usually due to aspiration of mucopus. Regarding liquids, there may be stomach contents, aspirated during general anesthesia or gastric lavage; blood, resulting from tonsillectomy and other mouth and pharyngeal operations; pus or mucopus, as during pneumonia, and infected water as in swimming."

C. C. Coakley (6) decides in favor of aspiration as the etiologic factor, arguing that embolism or infarct would produce a condition simulating pneumonia with gangrene supervening. It would suggest multiple foci of infection with general consolidation as probably due to infection reaching the circulation through the plexus of veins and capsule of the tonsil.

L. Clendening (7) considers all single abscesses due to aspiration of infective material and finds (8) lobar pneumonia responsible for less than 2 per cent of reported lung abscesses.

H. L. Lynah (9) calls attention to the fact that an embolic abscess is usually the manifestation of a general pyemic process involving many areas in the lungs, such as are found generally in post-partum sepsis, and are usually rapidly fatal. The very fact that he sees many of these cases in the clinics points strongly to the simple cause of aspiration as the chief etiologic factor in the production of pulmonary abscesses.

H. Lilienthal (10) in reporting thirty-one cases of resection of the lung for suppurative infection, states that "the commonest cause of the disease is infection due to the aspiration of septic materials during tonsillectomy."

P. W. Aschner (11) describes bronchiectatic abscess as a localized suppurative process in the course of a bronchus and thus far observed only in post-tonsillectomy cases.

I. Frank (12) C. B. Walker (13) and I. W. Voorhees (14) hold similar views.

If, as the foregoing evidence would seem to prove, we must look to aspiration of infective material during tonsillectomies as the most fre-

quent cause of these lung abscesses, what is the role of the anesthetic?

C. R. C. Borden (15) strikes the keynote of the logical explanation of the responsibility of the anesthetic when he says: "If anesthesia is carried to the point of abolishing all throat and lung reflexes, the natural protection of the lung cavity is gone." The mechanism of this reflex action he describes thus: "Stimulation of the sensory fibres in nasal mucous membrane causes an inhibitory action of respiration which protects the lungs from irritating and injurious gases and against too strong ether vapor. Stimulation of the glossopharyngeal nerve in the pharynx produces arrested respiration and a closure of the cords during the act of swallowing. Stimulation of the superior laryngeal nerve of the larynx closes the glottis by contraction of the adductor muscles and it also produces temporarily suspended respiration or cough."

The condition when the reflexes are abolished is then described:

"The larynx is partly open, cough is no longer available, the bronchi are dilated to their widest extent and the smallest bronchi are open pathways to the minute bronchioles and alveoli. No reflex connected with the throat or lung can hold for a given time against the expiratory center in the medulla oblongata. When sufficient CO₂ accumulates in the blood to stimulate this center, all forms of reflex, which cause suspended respiration, become inactive. When the respiratory center sends forth its stimulation, inspiration will be sudden and deep. The greater the need for air, the deeper and more powerful will be this movement. Violent indrawing of the breath we call a gasp; it may occur at any stage of etherization, but is more apt to occur when anesthesia is light. It is specially likely to occur when strong ether vapor is present because of the reflex fixation of the cords. If foreign matter is near the entrance to the larynx at this time, it is reasonably sure to be drawn through the glottic opening and carried to the large air passages. Sudden inspiration of blood clots and thick mucous is a most dangerous occurrence. The rushing air may carry the foreign material into the deeper channels of the lung where the cough reflex will be too feeble to expel it. Once wedged into a small tube, contraction and edema would soon occur and no available force could expel the foreign body. If septic material is present, abscess formation or pneumonia will doubtless result."

Anesthesia maintained at a stage which stops short of completely abolishing the laryngeal reflex—deep enough to prevent the gasp, yet not so deep as to inhibit coughing—will permit and favor the expulsion of any material seeking entrance to the trachea—blood, mucous or, as occasionally happens in oral surgery, detritus, sponges and even teeth.

As Chevalier Jackson aptly expresses it, "The cough is the watchdog of the lungs," and it is not for nothing in the evolution of human physiology that the laryngeal reflex is so delicate that the touch of a feather on the epiglottis will produce a cough.

Local anesthesia in preference to general cannot solve the problem, as it is not practicable in young children who furnish the largest percentage of tonsillectomies. Of sixteen cases reported in San Francisco hospital records for the past nine years, five post-operative pulmonary abscesses were in children. A further objection is the inherent danger from the toxic effects of the agent. The Committee on Local Anesthetics of the Section on Laryngology, Otology and Rhinology of the A. M. A. (16) reported twenty-seven fatalities in two years from the use of local anesthetics in nose and throat surgery and finds that deaths are vastly in excess of the number reported in the medical journals.

W. F. Moore (17) reports the largest number of pulmonary abscesses so far recorded, 202 cases in a total of 450,000 oral operations, or one abscess in 2500 to 3000 cases. To the four cases following local anesthesia previously reported in the literature he adds thirty-nine, and from the results of his questionnaire sent to 1020 laryngologists in the United States and Canada, finds that the inspiratory mode of transmission seems to be thought the most usual. He suggests that the incidence of abscesses in the local cases may be explained by the fact, established by Chevalier Jackson, that as anesthetizing the superior laryngeal nerve, which may be done by an application of an 8 per cent solution of cocaine to the lower part of the pharynx, abolishes all reflexes in the vocal cords so that they may be operated upon without producing cough, infective material may find entrance to the lungs during tonsillectomies under local, because of the inhibition of the bechic or coughing reflex, "the watchdog" being as effectually muzzled by local as general anesthesia.

The danger of the motor-driven apparatus may be obviated by standardizing the pressure. A proper ratio of the volume of air, not over 20 litres per minute, with a pressure of 30 mm. of mercury, with sufficient ether for anesthetic needs.

Some of the mechanisms which are used for suction and insufflation are regulated rather for the suction requirements than the air delivery, and it is undoubtedly true that aspiration may be caused by too high pressure in the effort of the anesthetist to deepen the anesthesia.

A grave danger of the insufflation apparatus, whether motor or foot driven, is caused by the method sometimes seen of immersing the ether container in a vessel of water, the temperature of which is not definitely controllable. There have been cases where vaporized ether, during a pause in the air pressure, condensing in the tube, has passed over in liquid form and been aspirated, with the production of pulmonary complications.

As between the motor and foot driven insufflation apparatus, the small foot bellows, operated by heel and toe movement, has several points of superiority, such as noiselessness (most of the motors are loud enough to drown the respiratory sound), a pressure low enough to merely deliver the vapor into the mouth cavity, which is all that it should do, and ease of regulating air pressure without withdrawing attention from patient.

Whatever posture be required by the individual

surgeon's technique, the anesthetist should be responsible for that immediately following the operation and until the patient is properly placed in bed. Particularly in children where some adenoid bleeding invariably persists for a longer or shorter time, the correct posture is a modified Sims, care being taken not to draw the under arm backward - to prevent burying the mouth and nose—and with the upper leg and thigh flexed to maintain the position which facilitates drainage while the patient is unconscious.

CONCLUSIONS

1. The preponderance of expert opinion is that the chief etiologic factor in the production of lung abscesses following oral surgical operations is aspiration of infective material during or subsequent to the operation.

2. Anesthesia of sufficient depth to abolish laryngeal reflexes or so light as to cause irregular gasping respiration may be contributory.

3. Local anesthesia does not prevent their occurrence.

4. The Insufflation apparatus should not be permitted to deliver air at a greater pressure than 30 mm. of mercury.

5. Semi-prone posture post-operatively is important in prevention of aspiration.

The whole trend of modern research is in the line of defining the dangers of too deep anesthesia, and the increasing prevalence of post-tonsillectomy pulmonary abscesses may be due in some degree to a disregard of this warning.

The final criterion—the end result to the patient—is influenced by the anesthetist's skill in obtaining and maintaining the lightest degree of anesthesia consonant with the necessary surgical procedure.

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What You Have Bought—"A story was once told of a man who stood on the steps of the Capitol at Washington for an hour trying to sell \$10 gold pieces at \$1 each, but no one would buy," says the *Journal of the Kansas Medical Society*.

Applying this text to the advantages offered by medical associations and organizations, the *Journal* reflects on the situation in this wise: "The Kansas Medical Society offers its members more than \$30 worth of service in payment of the annual dues; but in this case, while all of them pay the annual dues, only a small proportion accept the services offered them."

The *Kansas Journal* believes that its members are satisfied that membership in the society is worth the money paid, but that many do not appreciate the fact that they are entitled to much in the way of special features being conducted for medical men of which they do not avail themselves.

TREATMENT OF CONSTIPATION *

By R. MANNING CLARKE, Santa Barbara

We are told constipation is either spastic or atonic. This is true as a pathological classification, but should not be allowed to mislead us when it comes to our treatment and clinical relation to this malady. Atonicity is in all probability a secondary condition following spasticity. Both may be present in the same colon at the same time—spasticity in the descending colon and atonicity in the cecum. *Both are the results of long-continued irritations and inflammations; therefore, curing the irritation or inflammation will cure also the constipation, be it either spastic or atonic.*

Etiology—As a producer of irritation to the colon, the *cathartic habit* easily takes first rank. Not only the laity, but many of the profession as well, seem to know of no other means of obtaining bowel movement than “another cathartic.” Among cathartics, salts of all kinds, with their ever-present osmotic action, are probably more injurious than all others. Each dose deepens the malady it is given to relieve, and convinces the patient the more strongly that nothing short of “dynamite” will do them any good.

The indiscriminate use of bran and other irritating foods is another great cause of constipation. Vaunted by health lecturers and magazines, advertised by commercial food concerns, and many times by the doctor as well, it continues to be put into an already inflamed tract where its irritation, although producing bowel movement for awhile, only serves to deepen and increase the inflammation which is the basis of the patient's malady.

The enema is nearly as bad a criminal as the cathartic. It washes away normal secretions and introduces a foreign substance to further irritate the bowel and rectum. In addition to its tendency to produce pathology, it becomes a mental crutch to the patient and is, therefore, to be condemned.

The mental attitude is no small factor in the cause of constipation. The laity do not understand that the colon is made to be a garbage-can and that its walls and mucous surfaces are prepared by nature to handle the fecal matter without harm to themselves or the body. They think only of the “harm” and “injury” coming to them from the retention of such matter as the feces. Naturally, they look upon the function of the tract from the mouth to the anus as one of absorption, and when constipated they conjure up in their minds wonderful mental pictures of the condition they are getting into by lack of bowel movement. All this results in a cathartic more often than not, and many times it is by a prescription of the doctor. The patient continues to “beat nature to it” with a cathartic until *they get firmly fixed in the mind an idea that their bowels will not move of themselves.* They accordingly give up hope and go on with cathartics and its resulting train of colitis, nerves, and poor health. That their mental state is a vital factor in causing the trouble, I do not for a moment doubt. I have an intimate pro-

fessional friend who goes to the toilet immediately with a loose, watery stool the moment an O. B. call arrives over the phone. If the mental state can thus result in stimulation, why can it not conversely inhibit it as well?

Unbalanced dietary is a cause of constipation. The effect of this condition is seen most often in infants, but its results are often very noticeable in adults as well. It always results in portal congestions, and eventually in colitis.

Reflex irritations, as a gall-bladder, an appendix, an ulcer, or pelvic conditions are, of course, prolific causes of constipation and must all be sought out and corrected.

Irregular habits, and failures to promptly answer the call to evacuation, soon result in a loss of the “call” and eventually in inflammation of the pelvic loop, and should be named as causes of constipation. This is the rectal constipation, or dyschezia, of Hertz.

Unusual stress, or any strain that is beyond the ability of the patient to carry indefinitely, either physical or mental, is a great cause of constipation. The twentieth century business and social life are, therefore, a cause to those who are unable to bear it.

Symptoms—A proper understanding of the way symptoms are produced is essential to successful and intelligent treatment by the physician. There is a large school that still believes in the toxicity of the constipated patient, and who talk about being “bilious” and “the absorption of poisons and toxins.” There is, however, an increasingly large group who are accepting the teachings of Taylor, Adami, and others, that symptoms are caused by direct irritation of nerve endings and by distention of the gut. These teachings are based on thorough experimentation, and a study of the writings of the two schools will, I believe, convince all who approach it with an open mind.

The symptoms of constipation can be and often are relieved by a bowel movement, even before the patient arises from the toilet seat. As Hertz says: “It is within the personal experience of most people that the commonest symptoms of slight constipation—a dull headache and a vague discomfort in the abdomen, lumbar and perineal region—disappear instantaneously or at least a few minutes after the bowels have been well opened. Though the lumbar and perineal discomfort may be due to the direct pressure of the fecal accumulation on various nerves, the headache must be produced reflexly, as it would be quite impossible for a symptom of auto-intoxication to disappear so rapidly.”

If toxicity caused these symptoms, they could not be relieved so quickly. Alvarez, in meeting this argument, says: “We know that with normal kidneys a man will take two hours to get rid of perhaps 65 per cent of a dose of phenolsulphonaphthalein injected into his muscles. The layman appreciates this point best when he is reminded that after eating asparagus it takes from twelve to fifteen hours to excrete most of the aromatic substance that is noticeable in the urine.”

A toxicity may be caused from bowel condi-

* Read before the Section on Medicine of the State Medical Society, Yosemite Park, May 17, 1922.

tions, but most often happens from diarrhea, instead of constipation.

Vertigo, like headache, is one of the famous symptoms of constipation which the proponents of "auto-intoxication" point to as being impossible of arising reflexly. It is interesting to note regarding this that Leube reports a case in the German archives of Clinical Medicine, of a man who was a great sufferer from vertigo when constipated, always obtaining relief through a cathartic immediately. Upon examination, the patient complained of severe vertigo during the digital examination of his rectum.

That the classical symptoms of "auto-intoxication" can be reproduced by direct irritation of rectum and colon has been proven time and again. Donaldson, in his interesting and recent article in the J. A. M. A., packed the rectum with cotton pledgets soaked in petroleum and dusted with barium, producing after three hours' retention, return of the old symptoms suffered under constipation, viz., less ability to work, headache, dullness mentally, dizziness, etc.

Treatment—Symptoms, therefore, that are caused by the direct irritation and distention of an inflamed gut will, of course, be relieved by a curing of the inflammation and a removal of the irritation. Given an inflammation on an external surface of the body, it is always healed by a protective dressing and a removal of irritations. The same laws of nature which heal an external inflammation will also heal an internal inflammation. We, therefore put over the inflamed mucosa of the tract a "protective dressing" by the use of an intestinal powder which clings to the walls. By stopping fermentation and taking out the bulk from the diet, we remove irritations. When this is successfully done, constipation is cured, be it spastic or atonic. The treatment outlined in this paper will not appear rational to those holding the old ideas of "auto-intoxication," but having accepted the teaching that the symptoms of constipation are due to direct irritation and distention of the gut along with reflexes arising from the same irritations, this treatment, then, appears in the most rational light possible.

The removal of bulk from the diet is the one great means of reducing irritation to the colon. The diet must be reduced to liquids of no residue and kept thus until bowel movement has been accomplished. After this the diet can be very gradually and carefully increased. However, all tenderness over the course of the colon and abdominal distress of any kind must be gone before there is much increase in the bulk allowed in the diet. The following is a tentative grouping through which the patient can be put in the treatment of constipation. This suggestive grouping should take approximately six weeks' time to cover in treatment; in severe cases, longer.

Group A—Boiled milk, chocolate, cocoa, hot malted milk, broths, gruels, soups, bouillon, ice cream, sherbet, cereal coffee, Kaffee hag.

Group B—Eggs, raw, poached or soft boiled; yolk of hard-boiled egg with mayonnaise, cornstarch pudding, cream of wheat, rice sago, custard,

gravies of any kind, angel food cake, whipped cream, cottage cheese.

Group C—Toast of white flour bread, butter, soda crackers, oatmeal, cornmeal, rice, barley, or any whole cereal, macaroni, spaghetti, vermicelli.

Group D—Prunes with the skins removed, peaches, potatoes, baked or mashed, pumpkin or squash custard, dry lima beans with skins removed, any vegetable that can be pureed, as peas, corn, spinach, etc., vegetable gelatines, quince jelly.

The patient should be fed every two hours in the beginning, gradually increasing the interval as stronger food is given, until the patient is once more eating the customary three meals a day.

Medicinal treatment is mainly of a negative character. In other words, all cathartics are stopped entirely and the patient impressed that they must not be taken again except in great emergency. Enemas, whether medicated or plain, are also stopped, as they are a source of irritation. The intestinal powder should be given every three hours in the beginning, especially while on Group A. It not only provides bulk that is non-irritating while on a non-residue diet, but it is also very soothing and healing to the irritated mucosa and nerve endings. It should be gradually reduced as bulk is put back into the diet. The prescription is as follows: *R*—Bismuth subnitrate, calcium carbonate, calcium phosphate, aa oz. 1. Sig., one teaspoonful every three hours in water.

An oil enema of cottonseed oil (3 ozs.) should be given every night at 8 or 9 o'clock. This is very soothing to an irritable rectum and pelvic colon, and serves the purpose of keeping the fecal mass from becoming hard and scybalous. After a time the oil enema may be discontinued, using it only when necessary; that is, when the movement is hard and dry, or when there is no movement at all. In the case of no movement, a pint enema may be used to cleanse the rectum just before taking the oil. A larger amount should not be used, because it will pass up into the irritated colon. The oil-retention enema, along with regularity of habits and effort at evacuation following meals, are usually sufficient to relieve all cases of dyschezia.

Heat to the abdomen is a very essential matter in the treatment of every patient. Fomentations should be given every three hours, each set lasting fifteen to twenty minutes. A better result is thus obtained than is the case in continuous applications of heat. The applications should be short and intense.

Rest is of vital importance, especially to the exhausted patient. You are constantly importuned by patients to relieve their constipation and permit them to keep on at work, or at least not to go to bed. It is necessary to be off the feet to lessen mesenteric congestion and stop the constant massaging of the colon by the psoas muscle until such time as the irritable colon has sufficiently healed to permit it to continue its work regardless of these two things.

Exercise, instead of rest, is beneficial only to those patients suffering from dyschezia. These patients need activity, and the massage to the

colon of the psoas muscle incident to exercise. They have no inflammation in the colon, neither spastic nor atonic, and all normal colons are benefited by the right amount of exercise. Having lost the "call" to evacuation, they are assisted in regaining it by exercise. Teaching the patient to regain the lost "call" is an important part of the treatment of rectal constipation. It is accomplished by regularity in habits. Effort at evacuation should be made following each meal, since the taking of food into an empty stomach is the strongest known stimulation to peristalsis.

Psychology—As was mentioned under "Etiology," psychology can inhibit as well as stimulate intestinal activities. Patients just becoming addicted to cathartic and enema habits should have explained to them the A B C of colon physiology, thus dispelling from their minds fears of toxicity, fecal impaction, biliousness, etc. Their minds will dwell upon the subject, and it is best for them to think along correct lines. After bowel movement has been established, they will cease to dwell constantly upon it.

The patient should be impressed with the fact that their bowels will move without assistance when we get out of the way with irritations and causes of inflammations; that is, patients need help to get their thoughts into correct channels, for their thoughts are undoubtedly of great help towards success in this treatment.

SUMMARY

1. Cause of constipation is the same in both spastic and atonic cases—i. e., inflammation in the gut.
2. Curing the inflammation will therefore cure both types of cases.
3. Treatment is therefore identical in either case.
4. Treatment consists in stopping cathartics, enemas and irritating foods. Giving heat to abdomen, intestinal powder, rest in bed, and a gradual return to bulky food after the colon heals.

Doctors in Congress—Each State of the Union has two Senators. There are two doctors in the United States Senate. These are Senator Ball of Delaware and Senator France of Maryland. Senator Spencer of Missouri is a lawyer with an honorary degree of M. D. Senator Ball's term will expire in 1924, while the commission of Senator France will expire in 1923.

In the House of Representatives there are nearly four hundred and fifty members. Six of these are graduates of medical schools. Two of the six are from the State of New York—Congressman Kindred and Congressman Volk. Delaware, Louisiana, New Jersey, and Washington are the other four States represented by men with M. D. degrees, these being, respectively, Representative Layton, Representative Lazaro, Representative Olpp, and Representative Summers.

Representative Woodruff of Michigan is a graduate of the department of dentistry of the Dentist College of Medicine; Representative Edmonds of Pennsylvania is a graduate of the Philadelphia College of Pharmacy.

One and one-half of one-tenth of 1 per cent of the total membership of the two houses of Congress is small representation for the great medical profession of the United States.—Bulletin of the A. M. A.

EDUCATIONAL STANDARDS IN PHYSIOTHERAPY *

By RAY LYMAN WILBUR, M. D., Stanford University

It is a pleasure to have this opportunity to say something in favor of the physiotherapist, since I have the feeling that by proper standards (I use the term standards with trepidation in regard to the education of these workers) he or she can meet an urgent need.

When we speak of educational standards we recognize first, that we must have the fundamental standard and second, the technical standard. The fundamental side refers to an understanding of the basis of the practice of the profession, whatever it may be—and the technical part has to do with the knowledge and ability to apply the various forms of treatment.

Now, I think that we have in this present field of physiotherapy certain elements of danger, because of the emphasis so often put on technique without basic fundamental knowledge. In the present Medical Practice Act of the State of California an effort was made to delineate a fundamental training for both physicians and so-called drugless practitioners and to make a separation, at a point where treatment began, between those giving drugs and using the knife and those using the physical therapeutic agents.

This is very important, because we are so apt if we do not know a subject well to be very sure of ourselves in methods of known procedure. The more we know, the less sure we become. Consequently, we have to be very careful in this field not to develop a rather sloppy attitude. We are apt to start off and do just what we did in the training of nurses, that is, teach therapy without the underlying fundamentals.

The one primary essential is to have an idea as to the cause of the patient's disorder. Chester Rowell stated recently that you can always distinguish the quack from the true physician, because the true physician tries to find out what is the matter, while the quack is inclined to take the diagnosis made by the patient. I think this is absolutely sound. One attempts to get at the real facts, and the other is satisfied with only treating symptoms. These can wisely be treated for the patient's comfort of body and ease of mind when the factors causing them are being studied or are understood. In dealing with the sick, diagnosis is primary. Particularly in dealing with the subject of physiotherapy, where our problem is the relief of symptoms, it is important not to fail to have this background of the patient's condition.

Now, what are the first things to be done by a person who is preparing to practice physiotherapy? He or she must know something of biology. We can not deal with life unless we know what life is. Some form of biology must be studied, whether this is zoology or botany or both. Then, there must be knowledge of anatomy. It does not have to be the minute knowledge required in the practice of

* Address by Ray Lyman Wilbur, M. D., Stanford University, Chairman Section of Technical Specialties, before the Association of Physiotherapists at Yosemite Valley, Cal., May 18, 1922.

surgery, but it does have to include a thoroughly sound grasp of the essentials of human anatomy. Naturally, one must also have a good appreciation of the functions of the human body or physiology. In addition, any one dealing with the sick must know bacteriology and understand the relation of micro-organisms to disease. He also must have some idea of chemistry and know something of physics and the general features of psychology. I should say that as a background for all forms of dealing with the human body we must know something of biology, anatomy, bacteriology, chemistry and physics.

We would not care to take our automobile for repair to any one who knows nothing of its make-up or how it works. He should know something of the physics of the machine and should be an expert in the fundamentals of anatomy of the machine as well as the parts and materials from which it is made.

Unless we know, for example, the histology of the human skin, the physiology of the heat points and the cold points of the skin, how are we going to be able to understand the fundamental factors underlying the use of various methods of physiotherapy? In fact, we must ask all of those who engage in this field to understand the major facts concerned in the physiology of the vasomotor system.

So it is necessary to have an understanding of the skin, its physiology and diseases and especially a general knowledge of the vasomotor system and the effect of the method we are going to try upon them. That necessarily means that we must also know something of the body, circulation, respiration, and their relationships to the skin and the underlying tissues, which we expect to affect by our chosen form of treatment. Naturally, if we do not understand the main lesions of the skin, if we do not, for instance, know the local action of streptococci and other bacteria we will be lacking in a fundamental type of knowledge that one must have for intelligent handling of the sick. It is clear then that we must have a practical working knowledge of biology, anatomy (including histology), physiology, bacteriology, chemistry and physics if we are to treat the human body for its ailments. If we give a person a douche of the spine, we must understand insofar as it is known just what takes place in his body because of it. Besides, we must possess beforehand acquaintance with the patient's condition so that what is done may be consistent and logical. No matter how skilled we are we may do more harm than good if we do not have this point of view.

Now, frankly, one thing that the physiotherapist can use readily as a guide is the so-called sense of well-being of the patient. People "feel better" if they have the proper reaction, and those reactions do not take place if the treatment causes more damage than good.

We must also recognize in all of these procedures their effect upon the general metabolism, for the body of man is a machine which is being built up and torn down all the time. Physical therapy may accelerate either process.

The physiotherapist has a very important intimate personal relationship with the patient. The contact is an immediate contact while that of the physician sometimes is more formal. When the physiotherapist assumes this close relationship with the patient he or she *must* understand psychology to use this relationship so as to get the best results, mere mechanical effort will secure only 50 or 75 per cent of good results desired.

It seems to be quite clear that granted that we get a group of men and women interested enough in physiotherapy they will see that they get the proper amount of information. It is essential that they get their training under the best possible auspices. There is responsibility upon the medical profession to provide such training for those who want it and are prepared to receive it.

The proper training of the physiotherapists of the future will have to be some two or three years of college education at a minimum, including the subjects that we have mentioned, so that we may be sure that they have sufficient knowledge of bacteriology, physiology, anatomy and other fundamentals. To this should be added one or more years of practical work in the hospital clinic with good instructors. All the necessary training in the technical procedures should be under the guidance of the medical profession. It would be a sad thing to banish the physiotherapist from the great medical centers where his influence and assistance is most needed.

As the medical profession takes more and more hold of this problem, it must do so seriously. I feel that the State should work out a license plan for the physiotherapist. In fact, I feel convinced that we can not trust the treatment of diseases of the human body to any one, even as technical assistants to physicians, who has not the basic knowledge. The licentiates should include the properly educated physiotherapist in this State and there should be provision for adequate education for those others who wish to prepare themselves for the work.

My suggestion to this organization is to endeavor to establish a course of training and to get this recognized by the State and made acceptable to the medical profession. If you are going to organize this field, the standards must be high enough to keep out the ignorant and unscrupulous. Otherwise, hundreds of people with only a common school education, without any special training, will be brought in, and the name is apt to fall into disrepute and the profession become the refuge of broken-down boxing masters who empirically use its methods in a symptomatic way. You must bring into your profession and daily work the facts of which the most important are the fundamentals mentioned. Physiotherapists must maintain their dignity as a profession. The dignity of the profession depends primarily upon knowing what you are about and doing it.

Fire Risks of Hospitals—During the years of 1919 and 1920, there were as many as 870 fires in the classification "hospitals, asylums and sanitariums," in the United States.—Underwriters' Report.

CONSTITUTIONAL PSYCHOPATHIC INFERIORITY *

By WILLIAM HOUSE, M. D., Portland, Oregon

Constitutional psychopathic inferiority is one of the great and increasing problems of civilization of interest alike to neuropsychiatrists and general practitioners. Before society became so extraordinarily complex it was less important than at present. Inferior persons then mingled with their fellows without attracting attention, but with advancing civilization they more and more failed to amalgamate and became conspicuous through inability to fulfill their duties as citizens. Out of all proportion to their number they produce social discord, contribute to the divorce problem and other forms of legal controversy, propagate infections, cause and suffer from an excessive number of cases of illness, accident and injury, and furnish a majority of the inmates of almshouses, asylums and penitentiaries.

This paper contains few facts not familiar to most physicians. It will review the problem in the hope that by mulling over it, somewhere, somehow, a system may be devised which will insure that inferior persons may be so placed that their limited abilities will be better used and that the number of those who are to become charges of organized society will lessen; all of which will lead to increased happiness not only for them but for civilization as a whole.

My interest in these unfortunates was stimulated by service during the world war on an advisory board and later as consulting neuropsychiatrist for the United States Public Health Service. Prior to this service, like most neuropsychiatrists, I had come in contact with them infrequently except as they had already developed psychoneuroses or psychoses and had thought little of the possibilities of prophylaxis. In the former service I examined many constitutional psychopathic inferiors, not a few of whom were drafted, leaving work that they were able to do satisfactorily to become impedimenta and in the latter service I saw many of the same type now important contributors to the pension problem; all of which might have been prevented. Physicians, unless confronted by such people in some unusual way think little about them. Our minds are concentrated upon their cure or custodial care after they have reached an advanced and usually difficult stage. Therapeutic and administrative problems have all but obscured the problems of prophylaxis. Peterson, discussing the treatment of dementia precox, writes: "It is possible that in time we shall become able to recognize precox tendencies in childhood and learn methods of physical and mental training and psychotherapy that will help us to ward off in many cases the impending factor. Certainly prophylaxis will have a great application here some time that it has not now." Such prophylaxis would be more widely practiced if it were not for the curious system that gives us opportunity to examine people only

after they have become sick. If neuropsychiatrists could have access to students especially in high school and early college years they would discover many misfits for whom systems of education or occupation might be devised that would often prevent the development of psychoses and many of the other mishaps already listed. It is not difficult to recognize latent neuropsychopathic tendencies and to pick out persons who are predisposed to them.

Perhaps the most striking contribution of the great war to neuropsychiatry was the fixation of the knowledge that shell-shock was only an exaggeration of the commonplace psychoneuroses and psychoses of every day life that, fulminating on the battlefield, attracted widespread attention because of the dramatic method of occurrence. The multitude of cases caused numerous investigations and it was soon discovered that these disorders occurred not only on the battlefield but in detention camps, recruiting offices, and the offices of draft and advisory boards. Physicians quickly learned that there were types of individuals numbering hundreds of thousands who were more susceptible of breakdown than their fellows and that from these were recruited the mighty host who were described, more or less euphemistically, as victims of shell-shock. Many terms descriptive of these persons were used, one of which has remained in the consciousness of neuropsychiatrists. It is the most adequately descriptive phrase that has come into medicine in years. It classifies the unfit or partially fit who furnish the recruiting material for so many of the neuroses and psychoses as "Constitutional Psychopathic Inferiors." This term, cumbersome and philologically faulty though it is, will endure until some shorter and better term is invented. Recently the United States Public Health Service attempted to substitute the term "psychopathic personality" as being more easily applied, but it is less descriptive and, therefore, not so likely to be accepted.

"Constitutional Psychopathic Inferiorty" is a condition that occurs in a large majority of persons that definitely groups them as being in body and mind below the standard. It classifies many who, without regard to actual disease, are incapable of maintaining the pace set by average normal individuals. On the constitutional side one finds individuals whose bodies are not properly constructed and evenly balanced, either anatomically or physiologically, or both. No reference is here made to those who are smaller or larger than their fellows or who suffer from actual disease, or deformity from injury, which renders them incapable of advantageously pursuing life's burdens. The body of a constitutional psychopathic inferior may seem robust and powerful, may co-ordinate well enough in ordinary physical activities, may be free from disease, yet be incapable of performing continuously over a moderately long period on equal terms with normal men.

Classification—Constitutional psychopathic inferiors may for present purposes be divided into two great groups, though there are a large number of variants of sufficient degree to suggest a much larger number of groups.

* Read by invitation in the Neuropsychiatry Section, fifty-first annual session of the Medical Society of the State of California, Yosemite National Park, May 16, 1922.

Group One—Members of this group present mental and physical characteristics of a more or less static kind. They are more numerous but less troublesome as a whole than the second group and many of them are performing fair service in varied fields. Physically they tend to deviate from the normal, showing in moderate degree some of the stigmata of degeneracy with which, a quarter of a century ago, Max Nordeaux made the civilized world acquainted. Malformations of the eyes, ears, nose, teeth, palate, head, hands and feet, varying from slight changes to the profound changes seen in imbeciles and idiots are often present. To me their most striking characteristic is cold, clammy, bluish or purplish hands and feet, a characteristic that was early recognized as common in dementia precox. Indeed, this group is made up largely of potential victims of dementia precox; not that all of them will succumb to that disorder, but that all of them are on their way or can easily be sidetracked into ways that will lead to it. Pressure upon these bluish hands leaves white spots to which the blood returns more slowly than in normal individuals. The patient says his hands and feet are cold and his circulation is faulty. He complains that he is weak and easily fatigued, that he starts out to work with moderate enthusiasm but soon fails and that he is unable to apply himself over long hours or to keep his mind on his job and make his body work smoothly and rapidly. He reads little because he finds it difficult to focus upon the printed word and his mind refuses to maintain sufficient concentration to enable him to understand what he has read. His sleep is unrefreshing and troubled by dreams.

One suspects in such individuals that the heart is at fault, but examination reveals an organ in good condition, free from murmurs, yet often more or less sluggish in action with at most some weakness in the muscle tone and some hesitation or uncertainty in valve closures. The lungs and other viscera are normal except as accidental disease may affect them.

Mental Characteristics—These, discussed in part in the preceding paragraph, are almost constant. It will be observed that these persons are classified as constitutional psychopathic inferiors, not constitutional psychologic inferiors. Perhaps the second designation would be better than the first for we are trying to describe an individual who is psychologically inferior. The adjective, psychologic, indicates normal or physiologic functioning of the mind, while psychopathic implies a pathologic functioning of the mind. In constitutional psychopathic inferiors the mind functions normally much of the time, but under stress tends to deviate from the normal. The term psychopathic as here used does not include the frank psychoses or the developed psychoneuroses, but indicates only mental conditions that lead up to or make possible the added development of psychoses or psychoneuroses. One may be neurasthenic or psychasthenic without belonging to the class of psychopathic persons. During the war thousands of strong-minded men broke down with psychoneuroses; but practically all such

men recovered when relieved of strain and resumed their former modes of life without embarrassing effects. The mere fact that a man develops neurasthenia or psychasthenia or even a definite psychosis does not necessarily indicate a psychopathic strain. It may indicate only that he has been obliged to endure beyond the powers of the average individual. Of psychopathic persons this is not true. They break down when subjected to unusual strain whether in the nature of excess or of *departure from their accustomed modes of life*. This departure from accustomed modes of life was the principal factor in the causation of many cases of war shock.

Members of this group can be traced in the school from the earliest days of attendance. They are usually dull, slow of comprehension, difficult to teach. They read badly, find mathematics unduly troublesome and lack power to reason. They are always a little behind, not sufficiently to constitute feeble-mindedness, but sufficiently to make them trials. In early life they usually seem unaware of their failures, complain little and seemingly care less that they are of lower intellectual ability than their mates and are commonly not sensitive about it, taking their status as inevitable. There are, of course, many exceptions to such a rule.

In this group there is little of the active dominant incorrigible type and its members do not often get into serious mischief unless they are led by other active or more able persons. Seldom are they aggressive fighters or serious troublemakers except as one of them, older and larger, may tease and annoy his associates though even such a practice is infrequent because inferior persons are much more likely to be teased than to tease. As adolescence approaches they find increased difficulty in keeping up with their work and usually leave school. But departure from the average may be seemingly slight. Sometimes such persons exhibit fictitious ability in certain directions and are occasionally thought to be superior though defects in reasoning ability can easily be detected by skillful examination. They may even lead in class work and have high standings and the departure from the normal may exhibit itself only in the presence of asocial tendencies and unwillingness or inability to mix in the games and sports of other students. With adolescence they become more sensitive over their deficiencies and in numerous instances discover something of the nature of their imperfections. It has been said that "truth as such never hurt anyone." A notable exception to this rule may be here observed. Many inferior persons in attempting to learn something of their own natures take up psychology and I have on several occasions had one of them consult me with a diagnosis of his or her own status either as a psychopathic inferior or as an actual victim of dementia precox; and more than once such a diagnosis has been correctly made with disastrous results.

Notwithstanding his often obvious physical and mental defects, to persons of this type have been entrusted much of the heavier and commoner forms of labor which they perform well enough if

not crowded, not forced to deviate from slow-moving forms of labor, not submitted to undue excitement. It is thus not surprising that there are hosts of constitutional psychopathic inferiors engaged in more or less plodding forms of labor. They furnish a large proportion of those who follow slow forms of agricultural labor and the less keen and less active individuals in other occupations where sluggish work is performed.

Group Two—Members of this group are usually physically below the average. They have more marked malformations than the first group, especially in stigmata about the face and head, but lack the circulatory peculiarities described. Their personalities are often dynamic in contrast with the sluggish or static tendencies of the first group. They are seen at their best (or worst) in incorrigible boys and girls who, in addition to inability to learn properly, combine therewith an element of mischievousness which makes them constant sources of annoyances. They are conscious of inefficiency, of inability to keep the pace and win by fair means, they worry about their defects and finally compensate by practices not always of the highest moral standard. Beginning with misappropriation of small funds it is but a short time before nothing is safe in their presence. Minor forgeries, purchase of goods under false pretenses, violations of the moral code in every direction are characteristic. They are often gifted with an adroit cunning by which they escape tasks, sidestep discipline and pass responsibility for their misdeeds to others. One of their most curious mental attributes is ability to look their examiner in the face, to lie unblinkingly and when detected to invent a plausible excuse. Superficially at least there is a complete absence of any sense of shame. Such persons are often classed as pathologic liars.

These two groups, though classified under the general head of constitutional psychopathic inferiors, possess qualities that seem almost diametrically opposed. Members of either group are found in every walk of life. The first group is a collection of slow, passive, semi-inefficient or inefficient persons, the second a more or less dynamic compound of inefficiency and incorrigibility.

From the first group the transition to dementia precox is insidious and it is often difficult to diagnose an individual's condition as due to constitutional psychopathic inferiority and to determine whether he suffers from this condition alone or has added thereto some psychoneurosis or psychosis as, for instance, constitutional psychopathic inferiority with dementia precox or with traumatic neurasthenia. Constitutional psychopathic inferiors do not always develop clear-cut psychoses and one frequently finds a superadded neurasthenia or psychasthenia. The problem of handling them is partly medical, partly custodial and not infrequently industrial. This group presents the better opportunities for prophylaxis.

The second group provides a large number of drug habitues and criminals, especially minor criminals and an excessive proportion of persons who clutter up court dockets in one way or

another. They exhibit selfish indifference to the rights of others which gets them into difficulties from which they extricate themselves without much regard for consequences to associates. Few of them reach positions of importance. The problem of handling them is as much a problem of the law as it is of medicine.

Though I have tried to describe these two groups as if they were distinct and widely separated there are many individuals who possess some, often the worst, characteristics of either. For instance, a patient with the physical and mental stigmata of dementia precox often gets into difficulties with the law. But his crimes are rarely crimes of cunning and are more apt to be of the kind in which a youth kills his sweetheart or one of her parents and attempts suicide because she rejects him or because he is jealous. In other words, his offenses are ill considered and hasty, while the offenses of the second group are partly reasoned out and often performed in a crafty manner.

Causes—It is difficult to determine the etiology of constitutional psychopathic inferiority. Heredity plays the most important part, but how heredity works has yet to be explained. Normal parents sometimes beget inferior children. Inferior parents sometimes beget normal or even superior children, but the presumption is against such effects. Parental alcoholism has small bearing. Juvenile disease does not explain inferiority unless it be that the ravages of inherited syphilis may cause an occasional case. At present endocrine abnormality is often associated especially with the first group, but proof of such association is lacking; of course, if other organs are at fault, endocrine defect will be present, but the exact place it has in the pathological chain is not known.

SUGGESTIONS

Some suggestions to combat the ills discussed are here presented:

1. Physicians will find interest and instruction in attempting to recognize the types of persons described and will prove public benefactors if they will associate themselves with social service or other agencies with the intent that these people may be better classified and segregated.

2. Inferior persons should be educated along lines for which they are adapted. They have the same right to live as others, but it is foolish to train them for work for which they are unfitted. On such persons a college education is wasted and for most of them even a high school course of study is lost motion.

3. Pupils who are not measuring up to the normal average in public high schools and colleges should be submitted to careful neuropsychiatric examinations camouflaged if desirable under some other name, but made by neuropsychiatrists. By this I do not mean the psychologic tests which are now used so extensively, but neuropsychiatric examinations which will consider all the elements of mind and body that contribute to the affections under discussion.

4. Since inferior persons are commonly unduly

prolific and bring their own kind into the world, since many of them marry in haste and repent and are divorced with equal facility, it is advisable that greater restrictions be incorporated into marriage laws.

5. Constitutional psychopathic inferiors should be prevented from engaging in occupations that endanger the lives of themselves and of others, especially in work about trains and in a host of other occupations.

6. Every railway company and every other large company employing numbers of men in dangerous occupations should have these men submitted to neuropsychiatric examinations with the same frequency and regularity with which the railway companies at present require tests for color blindness. Parenthetically, such tests would detect not only psychopathic inferiors, but many victims of incipient psychoses, notably paresis, which have been the cause of many wrecks.

7. Neuropsychiatrists, as a body, should stand for prophylaxis and should make every effort to prevent the development of psychoses wherever such disorders are preventable. They should heed the lessons of the great war, one of which clearly shows that neuropsychopathic persons break down under strain and maladjustments who would escape if kept within their proper spheres. It has been said that "the man who was no good for war or no good in the army was no good anywhere else." This is a half truth. Many men who were unfitted for army work were useful citizens in hundreds of other occupations. If there be predisposition to neuropsychopathic disorder in an individual he should not be subjected to the strains of work for which he is unfitted.

8. One of the greatest opportunities for neuropsychiatry lies in the field of increasing interest in the study of persons who as yet have not developed actual psychoses, but who are on their way and prevention here, as in many other fields, should constitute a more than laudable ambition.

(1011 Selling Building)

Councilmania Not a New Amoeba—In a recent contribution to the *Journal of Parasitology* (September, 1922) Herbert Gunn criticizes the establishment of a new species of pathogenic amoeba by Kofoed and his fellow-workers. Kofoed has described as a new species, which he names *Councilmania Lafleuri*, a type of amoeba which he believes has hitherto been confused and included with *Entamoeba coli*. Kofoed has described and figured the essential differences between *Entamoeba coli* and this new species which he considers pathogenic.

In this article Gunn concludes on the basis of his own studies and observations that "there is no foundation for considering *Councilmania Lafleuri* a new amoeba; second, that the authors were dealing entirely with *Entamoeba coli*, being led into error by an incorrect interpretation of staining reaction, by according too much weight to characteristics of amoebae in the motile state, and by the production of artefacts in the preparation of specimens."

Gunn states that he has been able to duplicate the forms figured by Kofoed, securing them through traumatic pressure on cysts of *Entamoeba coli*.

Gunn agrees with the conclusion of Wenyon, who adds *Councilmania Lafleuri* to the long list of synonyms of *Entamoeba coli*.

BRISEMENT FORCES AND THE FOR AND AFTER TREATMENT *

By A. GOTTLIEB, M. D., Los Angeles

To restore motion inhibited by contractures and to rehabilitate function lost from disuse is the purpose of brisement force with its for and after physical therapy. By means of this forcible maneuver the surgeon aims to stretch the elastic and to tear the inelastic intra-articular, periarticular and perimuscular adhesions which are the reasons for the restriction of joint motion. It has fallen in disrepute because the results were oftentimes discouraging, having led to increased restriction of motion, to lasting pain and to mishaps mentioned below. Such failures are attributed to: (1) lack of pre-operative treatment, (2) disregard of contra-indications, (3) incorrect technic, and (4) to neglect of adequate after-treatment.

1. *Pre-operative Treatment*—Before submitting a patient to forcible breaking up of adhesions, physical therapy should be administered for at least six weeks. This, in order to soften and resolve superficial and deep scars; to loosen adherent tendons and muscles from their bases; to stretch and strengthen fibrosed and atrophied muscles; in short, to prepare the surrounding tissues for the forcible correction of the joint.

The most valuable remedy to overcome the resistance of scar tissues is negative galvanic ionization. Iodine ions are most efficient and are introduced either by means of locally applied electrodes with pads soaked with a 2 per cent solution of lithium iodide or through a hyperthermal local bath which carries the iodine salt in solution. In either method, the negative pole is the active and the positive the indifferent one.

Preparatory to ionization, the joint is exposed to radiant light and heat for superficial and only limited penetrative action, and to diathermy for a through and through heating. Both methods induce tissue hyperemia, the important influence of which is too well known to need rehearsing.

After this the joint is massaged, manipulated and actively exercised to dissipate the effusion artificially created and to gain all the further advantages attainable by mechanical means. Whatever corrections are gained should be maintained from day to day of treatment by means of a brace which holds the joint in its new position and which, in addition, stretches the tissues and increases muscle power by elastic pull attachments.

2. *Contra-indications*—a. Bony ankylosis should be regarded as the principal one. It invites disaster in all brisement attempts, because a joint fracture is almost certain to result.

b. Infectious processes within the joint itself or in remote regions of the body with arthritic changes within the joint, should warn against brisement procedures. A supposedly healed osteomyelitis or a tuberculous area within or near a joint has flared up after the operation. It has been noted that a traumatized joint has become the locus minoris

* Presented to the Section on Orthopedic Surgery of the California Medical Society, Yosemite National Park, May 17, 1922.

resistencia and developed into an acute arthritis if the patient had active remote foci of infection, such as in the teeth, the tonsils, prostate or other organs of the body.

c. Severe cases of desmogenic contractures about a joint. Here we encounter difficulty in estimating the applicable force and insuring its action at the required place. Force may lead to such mishaps as fractures near a joint; subluxation or entire dislocation of a joint; tearing of old scars and nerves with following paralysis of the periphery; rupture of a large blood vessel with consequent extravasation of blood and serum which may produce more adhesions and may, at times, lead to gangrene of the peripheral end of the extremity, necessitating amputation.

Death from embolism, reported by Payr, Colley, Ahrens and others, should not be classed as a contra-indication, but rather as a misfortune of very rare occurrence.

d. Constitutional diseases and defects which would preclude operations on the skeleton, like hemophilia, active syphilis, diabetis and other ailments which inhibit healing of torn tissues and lead to flail joints.

e. Danger to the patient from general anaesthesia.

3. *Brisement Technic*—The patient should be fully anaesthetized to obtain complete relaxation of muscles. The non-relaxing of soft tissues indicates that they are shrunk, contracted or adherent to underlying bone. Sir Robert Jones advocates gas anesthesia in mild cases, because the patient comes out of it quickly and may immediately move the joint voluntarily, which is of "considerable psychological advantage." Gas, however, only offers partial relaxation and can merely be utilized to abolish the pain of manipulation in light cases.

All movements of the joint are slowly and carefully executed within the full anatomic range. The adhesions are overcome by an audible and palpable crackling, the noise of breaking the fibrous adhesions. This accomplished, the joint can easily be moved in all normal directions. In rare instances are the adhesions so firm that they resist any reasonable force. It then becomes necessary to perform the correction in stages or to loosen the adhesions from the underlying bone by subcutaneous or open operation.

For each individual joint or for a group of joints, such as the spine, the technic varies in the selection of the position of the patient, in the method of grasping the levers and in choosing the fulcrum over which the joint is fixed for the maneuver. Two principles apply in the correction of all joints: (1) Avoid choosing too long a leverage and applying too much force, and (2) stop manipulating when the definite adhesions have given way and the resistance to normal motion has been overcome.

Proximal bones around the knee and elbow are liable to fracture, especially if there has been an old fracture near the joint or if the bone is porous from disuse. Precautions against mishaps consist in applying a well-fitting plaster splint on

the entire extremity, then resecting a cuff or wedge around the joint large enough to allow all movements to be passively executed.

To guard against capillary hemorrhage which follows forcible correction, the joint, whenever possible, should be made bloodless by applying a circular bandage wound from the periphery of the extremity centralwards and tightened well above the manipulable joint. The bandage is removed from the limb, except at the distal end, where it serves as a tourniquet. The extent of the traumatic bleeding between the joint surfaces will thus be reduced to a minimum. The tourniquet is not removed until a compressing elastic bandage has been applied over the extremity in the corrected position. The compression of this bandage prevents effusion, while the elasticity of it upholds the motion of the joint.

4. *Aftertreatment*—The therapy which succeeds the forcible manipulation is like the treatment given in cases of traumatic arthritis, arthrosis or sinusitis. It is along the lines advocated by Willems, who says: "I would urge surgeons to pursue it (active immediate mobilization) to the end with the conviction that functional result will be the more brilliant in the same proportion as the effort to obtain it have been more energetical and tenacious."

Aftertreatment begins with the application of the compressing elastic bandage to prevent swelling without inhibiting active motion. This should be instituted immediately after the effect of the anesthetic has ceased. The patient is instructed and encouraged to perform active movements every two hours for not less than 10 minutes at each time, and always within the limit of pain which should be insignificant and of short duration after the exercise. The elastic bandage can be removed the day after the operation, but should be reapplied if the patient experiences lasting and stronger pain after the movements or if the effusion, plus gradually diminishing range of motion, follows a therapeutic sitting.

Treatment is given daily and consists in the application of such electrical and mechanical modalities as have the tendency to soften fibrous tissue and to dissipate traumatic effusion. The part is first exposed to radiant light and heat for about 30 minutes, followed by negative galvanic ionization or diathermy; then light massage, mild vibration and passive manipulation should be used to disperse the effusion and to reduce the swelling. Each sitting should end in active movements which are assisted or resisted by the operator or by a mechanical device. It is advisable to instruct the patient to perform some form of useful work at home or in a workshop, thus unconsciously moving the joint.

SUMMARY

Stiff joints which do not limber up after about six weeks of thorough physiotherapy, should be submitted to brisement force under complete general anaesthesia, provided, however, that due respect has been paid to all contra-indications, such as re-

awakening of a dormant infection, establishing an acute arthritis or producing a fracture, dislocation or severe tear at or near the joint.

Satisfactory results can be expected only if forcible manipulation is followed immediately by active and passive motion and by physiotherapeutic aftertreatment.

(605 Consolidated Realty Bldg.)

THE TREATMENT OF PAINFUL AFFECTIONS INVOLVING THE CERVICAL VERTEBRAE.*

By HARRY LESLIE LANGNECKER, M. D.,
San Francisco

In bringing the subject before you for consideration, I do so with a realization that conditions herein mentioned must be more thoroughly understood, both regarding diagnosis and treatment, if better results are to be obtained. These facts became evident upon making a survey of a large number of clinic and private records, involving the cervical vertebrae. In order that some tangible classification might be used the case records were grouped as follows:

Group 1 included the most severe injuries and inflammations, such as fractures, dislocations, bone tuberculosis and syphilis. With the extensive bone pathology readily observed, immobilization was the usual treatment used. But after fixation had been discontinued, what about further efforts to restore better function?

Group 2 included the arthritic cases exhibiting bone proliferation from minute to profuse osseous changes. The search for infectious foci was ardently pursued. After the possible foci had been eliminated what further treatment would lessen the patient's discomfort and prevent more malfunctioning?

Group 3, by far the most numerous, were the cases complaining of obscure pain in the neck region. By a process of exclusion, particularly radiographic examination, no evidence was found of organic disease. With a diagnosis of "no disease," the patient was usually admonished "to forget about the pain in the neck."

The failure to recognize and adequately to treat these defective postural cases, leads to permanent disability; frequently drives the patient in quest of relief to try many measures, some of which may retard recovery and may be harmful. This group of cases is usually poorly treated, because, in the absence of any grave evidence, little attention is given a bodily condition influenced by faulty postural habits or repeated occupational strains or the intensity of social activities.

After a correct diagnosis is made, adequate treatment should be given to restore function to a maximum degree, or at least prevent increasing deforming disability. All legitimate available facili-

ties should be utilized. Besides the elimination of infectious foci the detection and correction of defective postural conditions should be zealously practiced.

Of the various methods of treatment *rest to the disabled part* is essential. It may be complete fixation, partial by the use of apparatus, continuous recumbent position, or change of occupation, naturally regulated by the seriousness of the condition. Such fixation should be adequate, of just sufficient duration, and gradually removed.

The *improvement* of the muscular and ligamentary *tissue tone* is greatly accelerated by producing an active local hyperaemia, with the employment of moist or dry heat, electricity or massage. Dosage should be gradually increased in vigor, not too frequently given, and of short duration.

The *movement* should be *early attempted*, usually while still in the fixation stage, in order that muscle control may be re-established. On partial removal of fixation, normal movements of the affected part must be encouraged. Passive motion and manipulation should be avoided. But rather active assistive and resistive motion be employed in a very gradual manner.

Training in carefully selected *active exercises* should complete the course of treatment. Such exercises should inculcate better muscle action toward bodily equilibrium and good habits of posture. A few well planned movements regularly performed, for short periods, will overcome many obstacles in restoration of function.

(Stanford University Hospital.)

The Layman in Public Health.—In the last fifteen years there have grown up these relatively powerful organizations of laymen for the prevention of diseases. They have created a certain chaotic condition in the public mind; and there is at the moment a certain anxiety as to how we are coming out if we go on with this multiplication of organizations clamoring for funds, enlisting groups of people, working at the one great problem, namely, the problem of preventive medicine and public health.

I think that the organizations themselves are waking up to the difficulties. I think there is a movement for the consolidation—certainly toward the co-operation, but I think toward the consolidation—of these organizations so that we can get a great unified, organized movement in the direction of public health. There is also going to be a well recognized definition of responsibility in the minds of these organizations and it is primarily this: that their chief obligation or chief function is concerned with public information and education; that they are not concerned with the administration of health affairs in the American community—that belongs to the health officials. Very often individuals become confused in their minds. Very often even lay people get excited and think they can administer health affairs. Occasionally we see a society that believes it can take on some of the duties of the health officer. If it thinks so it is off the track. The one thing that a lay organization must remember is that the responsibility for administration of health affairs rests upon the shoulders of the health officials, and that the function of the lay organization is to prepare and educate public opinion to support these health officials. That is the whole situation.—Livingston Farrand, M. D., in *Health News*, New York State Department of Health.

*Read before the Section on Orthopedic Surgery at the fifty-first annual meeting of the Medical Society of the State of California in Yosemite National Park, May 16, 1922.

EDITORIALS

BORDEN'S BABY BRAND MILK

(Considered and approved for publication by the
Publicity Bureau of the State Society.)

We have before us a letter addressed to the medical profession from the Baby Welfare Department of The Borden Company, New York. We have read this letter a number of times most carefully, and are not quite sure of our understanding of all that it says. The following statements in particular, quoted from this letter, are deserving of careful consideration by members of the State Medical Society.

"To satisfy the growing demand by pediatricians for a sweetened condensed milk put up in glass containers Borden's Baby Brand Milk has been sold by us since 1903.

"This product is not advertised to the public, and no directions appear on the container or carton. Inside the carton, however, there is a loose folder giving simple general directions for cleanliness, and feeding preparations. Should you desire to recommend Baby Brand Milk with your own special feeding directions your druggist will gladly remove the feeding direction folder from the carton if you will simply make the request on your prescription blank. . . .

"Borden's Baby Brand Milk is identical in every respect with our Eagle Brand, thus insuring the highest quality sweetened condensed milk obtainable."

"CASES" OR "PATIENTS"

A medical editor and teacher of medicine has said that it is possible to predict the success and forecast the future of one who treats the sick by the uses he makes of the words "case" and "patient." Clifford Albutt, William Osler, Oliver Wendell Holmes, George Simmons, and many other great medical editors have frequently deplored the abuses of "case" and "cases" both in medical literature and in medical vocabulary. "Case" is a perfectly good word when properly used, but it is not and cannot be made synonymous with "patient." One well-known medical writer said recently that he had never fully appreciated the differences between "case" and "patient" until one of his colleagues who had been called in to see a member of his family referred to his desperately sick child as a "case."

Simple rules governing the uses of these words have been published many times in many places, and yet every editor of a medical publication is constantly distressed by the faulty uses of the words in manuscripts. This probably will continue until the teachers of more medical schools consider the error of enough importance to notice and—after correcting their own methods—teach correct usage to medical students.

If the question were only concerned with good usage, the frequent errors would not be so important. However, it goes much further, even into

the philosophy of the practice of medicine. To an ambulatory scientific laboratory every sick person is a "case," but to the true physician every sick person is a "patient."

PRACTICING MEDICINE BY MAIL

(Considered and approved for publication by the
Publicity Bureau of the State Society.)

Mail order practice of medicine is assuming rather large proportions. There are numerous organizations of one sort or another, most of them east of the Rocky Mountains, that are engaged in the practice of medicine in California. The volume of this business is, of course, difficult to estimate. What data we have been able to secure indicates that it must be a rather large business or else the costs of advertising and other forms of salesmanship must be provided from some other source. One of these concerns, located in Cincinnati and apparently doing considerable business in California, enters into a contract with a subscriber to keep him well and to treat him, within certain limits, by mail, for fifteen dollars a year. The contract which this mail order doctor signs, and the form letter in explanatory literature with which he supplies his subscribers states, among other things, that they will make a "thorough, dependable, and complete chemical and microscopical analysis of the subscriber's urine upon receipt of sample once every ninety days for the period of this subscription." They furnish subscribers addressed containers to forward specimens of urine and keep the subscribers reminded of the date on which the specimen is to be forwarded. They do not, of course, tell the patient that examination of the urine, however well done, when it has stood a couple of days and been transported to Cincinnati, Ohio, or elsewhere by mail, is worth very little to any physician. They also agree to "send the subscriber a self-explanatory key for each report, together with diet suggestions and recommendations of their Medical Advisor, who compares each report with all previous analyses." The dangers of advice of this kind are, of course, obvious to every physician. They will not be understood, however, by the average patient, and these mail doctors therefore lend a "self-explanatory key" for the diets and diet suggestions that they apparently consider within the provisions of California law.

In a letter from one of these mail-order-practice-of-medicine concerns forwarded to us by one of their patients, it is stated: "There is one certain analysis that sounds the danger signal in ample time. One certain analysis that enables you to prevent the seizure of your body by such things as Bright's Disease, Diabetes, Heart Disease, and a host of others." And again, that they give "subscribers an accurate, complete, and infallible report every ninety days. This report shows the true condition of your body. It gives advance information of any approaching disease." Both of these statements are false, misleading and extremely dangerous, and there ought to be some method of preventing the continuance of this form of the "practice of medicine."

DEFINITIONS MUST BE DEFINITE

"*State Medicine*," corporation medicine, social health insurance, lodge practice, social medicine and what-not under one name or another continues to be a controversial question for us. It will continue to be a source of much fruitless discussion until 100 per cent of the profession, through its organizations, takes an emphatic fighting stand against the whole thing and backs its organizations, both morally and financially, to do the work, or until some form of so-called medical and health service becomes a law and physicians become political appointees, rated, ruled, licensed and controlled by lay government officials.

Few of us fully realize the constant progress commercialized medicine is making, nor all of the disguises under which it works. The most amazing phase of this problem is the number of physicians who honestly oppose the socialization, nationalization and commercialization of medicine and who themselves are engaged in some of its most insidious and dangerous forms, apparently without realizing the full significance or trend of the work they are doing.

This comes of a lack of clear definitions of what is meant by "*State Medicine*," socialized medicine and all of its other names. Definitions must be definite and not contain a barrage of delphic words that will permit anyone to do anything, any time, any way he pleases. Some definitions of "*State Medicine*" offered by its partisans merely mystify and give us no clue to their meaning.

OUR FAULTS IN WRITING

"Not long ago Dr. George H. Simmons, editor of the *Journal of the American Medical Association*, was called upon to give an address as president of the Chicago Institute of Medicine. He selected as his subject, 'Medical periodical literature,' upon which he is so well qualified to speak, because of an acquaintance of nearly thirty years with medical journalism. He began by reviewing the growth of the medical periodicals in the United States. When Oliver Wendell Holmes was chairman of a committee of the American Medical Association on medical literature, in 1848, only twenty medical journals were published in this country. The number had risen to 230 in 1903, but it has since declined to 120. Doctor Simmons notes 'a distinct change in the type of papers appearing in medical journals today as compared with twenty years ago. The therapeutic article of the past, replete with favorite prescriptions, often proprietary in character, has given way to scientific contributions on therapeutic methods, on pharmacology, on pathology, on etiology, on methods of diagnosis, on prophylaxis.' Although the number of medical journals has decreased in late years, the volume of writing for publication has not undergone any diminution, for the *Journal of the American Medical Association* is now receiving about 1500 manuscripts a year, exclusive of the papers submitted to the Sections of the annual meeting. It seems that about three-fifths of the manuscripts voluntarily offered are returned, and

Doctor Simmons devoted the greater part of his address to a consideration of the reasons for the rejection of the majority of the papers submitted for publication.

"One reason for rejection is lack of space. Some of the papers received are excellent both in the matter treated and in the manner of presentation, and there is no doubt about their acceptability. Many papers are too long, but one that is informative, that presents new facts or practical information, is not returned if fairly well written, though it may be necessary, with the author's help or approval, to shorten or revise it. The question of the proper length of a paper, like Einstein's theory as to space and time, is a matter of relativity. A paper of 500 words may be long; one of 5000 may be short. Undue length is a common fault, and Doctor Simmons finds three chief reasons for it. The first is 'rambling,' due to the absence of a plan, so that the author repeats himself and meanders to reach a given point. As a remedy, cross headings are recommended, not only because in a paper of any length they are of assistance to the reader, but because the task of introducing them reveals to the writer defects in the logical arrangement of his matter. If the proper beginning is not apparent, Doctor Simmons recommends the author to go right to the subject without preliminaries; to begin in the middle if necessary; when the end is reached the difficulty of the beginning will often have disappeared.

"The second cause of undue length is verbosity, which is to be remedied by revision. When revising a manuscript one ordinarily finds many words, phrases, clauses, sentences, and occasionally even paragraphs that can be struck out without detriment to the meaning. Such deletions not only save space but improve the style and help the reader.

"The third fault is the tedious discussion of non-essential details. In an extreme form this fault is displayed by papers in which the author, who has a new fact or observation to make, buries it under a mass of material which often takes the form of a long historical introduction.

"The real remedy for the defects which Doctor Simmons sees in paper after paper received at the editorial office of the *Journal of the American Medical Association* is, in his opinion, a more careful study of the art of writing and a thorough revision of all papers submitted for publication. In support of this he quotes Sir Clifford Allbutt's method, as described in his book, '*Notes on the Composition of Scientific Papers*.' The plan of this well-known medical writer is, first, to put down ideas and facts on slips of paper and sort them under headings; then to make a first draft and revise it; then a second and revise it; then a third and revise it; and then to put the whole away for at least a week 'in order that the final reading may be done with refreshed attention.' It may be noted that this method was also employed by Lafcadio Hearn in all his writings. Sir William Osler wrote in much the same way. During an inspection of some of the manuscripts in the Osler library, Doctor Simmons was able

to trace one article through its various stages: First there were notes on odd bits of paper, evidently written at odd moments; then there was a rough outline on the paper in long hand; then the first typewritten copy, with interlineations, transpositions, and deletions; next the second typewritten copy, which had been considerably modified; and finally, the third typewritten copy, which had been sent to the printer. "If," Doctor Simmons asks, "this is the method of the masters, what about the rest of us?"—(W. M. K., United States Naval Medical Bulletin.)

MANUSCRIPTS FOR PUBLICATION IN THE JOURNAL

The Journal has on hand and ready for press enough original articles to fill the numbers of the Journal up to and including March or April. About forty papers presented at the Yosemite meeting of the State Society have not been received by the Journal, or have not been returned in revised form for publication.

In addition to those now on hand, we can use about thirty manuscripts of 4000 words or less before the papers from the 1923 meeting of the State Society begin to come in.

In making up each number of the Journal, the editorial staff tries to distribute its original papers somewhat in accordance with the various recognized sections of the State Society; takes into consideration to a certain extent the geography of the State, and also considers the length of time that the final, revised and accepted manuscript has been in the office.

The official rules of the council governing publications in the Journal are printed herewith again for the information of all members:

1. The Journal will not publish original manuscripts except as presented by members of the State Society; provided, in the case of invited guests to the State Society or one of its constituent society meetings or invited guests to some special conference or meeting, they may be accepted at the discretion of the editor.

2. Except in special instances approved by the Publicity Bureau, manuscripts will not be accepted for publication in the Journal until they have been presented at a State Society meeting or a meeting of one of its constituent societies.

3. Manuscripts consisting essentially in individual case reports, unless these reports deal with extremely rare or unusual conditions, are not considered as being suitable for the Journal.

4. The editorial staff, as is usual in publications, shall reserve the right to modify, condense, extend or reject any manuscript from any person.

5. As a matter of policy, which may be changed only in special instances, the Journal will not accept articles of more than 5000 words and will give preference to those of from 2000 to 4000 words.

6. The Journal being intended to represent the entire membership of the State Society, the editor will, as far as feasible, give preference to material for publication that promises to be of the greatest good to all members of the profession.

7. In the selection and rejection of manuscript the editor and the Publicity Bureau will be guided in their action by the merit of the paper and to a limited degree by expediency. No discrimination will be made between the manuscript read at the State Society meeting and one read at any constituent society meeting. The determining point in both instances shall be the merit of the paper, and neither the Publicity Bureau nor the editor is obligated to publish any manuscript simply because it has been presented to either the State meeting or any other medical meeting.

HYGEIA: A JOURNAL OF INDIVIDUAL AND COMMUNITY HEALTH

For years the medical profession has felt the need for a periodical through which the public might be enlightened in matters of medical science. At the session of the House of Delegates in St. Louis, the sentiment crystallized and the board of trustees was authorized to proceed with this publication. As shown by the minutes of the last session of the board (page 1936), plans have now matured sufficiently to permit definite announcement. The April, 1923, issue—ready in March—of Hygeia: A Journal of Individual and Community Health, the first number of a scientific medical magazine for the public, will mark what, it is hoped, will prove to be another great step in the service which the American Medical Association is rendering to the medical profession and to the people of our country.

Aside from the utilitarian aspects of the title Hygeia—its brevity, ease of pronunciation, simplicity and attractiveness—it is symbolic of the very foundation of medical science and preventive medicine. The name signifies the purpose of the periodical: To interpret medical science to the public; to inform the layman concerning the fundamental facts of physiology and pathology; to keep him in touch with the advance that scientific medicine is making in the prevention and alleviation of disease. By its physical form, its attractiveness, its interest and its practical value, Hygeia should appeal to the lay reader as a publication worthy of his attention.

It is hardly necessary to tell physicians that there are many special problems confronting the editorial staff of the new publication. Every physician has been faced with the difficulty of placing a medical subject suitably before a lay audience. The speaker or writer has to put himself in the place of those whom he would enlighten; he must speak in the language of the masses; he must interpret technical terms in words of every-day usage. For the understanding of facts in relation to disease, for comprehension of immunologic reactions, for explanations of the way in which bacteria gain entrance into the body and produce infection for knowledge of how various drugs produce effects within the body, certain fundamental knowledge is necessary. Unfortunately, the vast majority of our public do not have it; they have no knowledge of the essentials of either the anatomy or the physiology of their own bodies. The problem, as has been said, is a difficult one; but it is hoped that, by leading from the elementary to the advanced, and by the use of chart, diagram, table and picture, Hygeia may be of service to every reader.

Everywhere, the board of trustees, the council on health and public instruction and the editorial staff have met a most enthusiastic response and are receiving offers of whole hearted co-operation. Among the contributors whose articles will appear in early issues are scientists of note who can write in the language of the intelligent layman; moreover, many lay writers whose names are household words among the American reading public have agreed to give their assistance. It now remains for the medical profession to do its share in placing this journal in the hands of the public. On their co-operation will depend largely the success of the enterprise.—Journal A. M. A.

105 Physicians Sue to Annul the Dry Laws Affecting Medical Practice—According to the New York Times of November 19, 1922, action has recently begun in the United States District Court to annul the United States prohibition law insofar as it restricts physicians to a limited amount of alcoholic beverages in the treatment of patients. This action was brought at the instance of a group of 105 physicians headed by Dr. Samuel W. Lambert, dean emeritus of the College of Physicians and Surgeons of Columbia University.

SOME MEDICAL PROBLEMS

Parodying the words of Coleridge, we might say: "Problems, problems everywhere, nor any time to think." Religion, law, art, teaching, medicine, all are busy trying to adjust themselves and it cannot be said that the way or light is always clear. Every group in the body politic is being weighed and measured and new values are being established. Institutions, traditions and beliefs that seemed a very part of the people themselves have been found wanting and thrown into the discard. I do not think this is much different than it has always been, just more intensive. The world was jolted from an orderly progression to disorderly, hasty action that kept us wondering "what next."

I have no sympathy with the statement that the code has outlived its usefulness. The trouble is we are not as familiar with it as we should be. We are too prone to apply to where application is not possible and then to discredit it. I can see how, at the present time, it should be enlarged to serve as a guide to our collective action in matters where the whole body politic is concerned, but in the relationship of physician to physician or individual physician to individual patient, it stands as the wisdom gleaned from years of experience. . . .

Whatever headway State medicine had made in Michigan was completely destroyed by our discussion of the subject at the Kalamazoo meeting, and it will remain so long as we, understanding whence it came and what it means to our State, are united in opposition to it.

During the period of unrest, happily passing, attempts to discredit the medical profession was a somewhat popular indoor sport in which a few of our own members joined. Every reformer in health matters began or bolstered his campaign by questioning the honesty or ability of the physicians. We sometimes felt that we were on the defensive and by accepting statistics of little or no value sometimes felt discredited. . . .

Another example of faulty statistics was that pertaining to a pregnant woman in Michigan. Indicating that she had exceptional and unusual danger dependent on the care given her by the medical profession, to say this is to say what is not so. There are no statistics of value to even suggest it. . . . The pregnant woman of Michigan can rest assured that her family physician is alive to her needs. He will instruct her and will bring to her whatever the profession has for her relief and care. To admit the truth of such loose statements would be a serious reflection on ourselves and our medical colleges, for the medical men of Michigan are just as good as our schools have made them. . . .

Visiting the sick in their homes is your point of greatest contact with the public and it should be conserved. Its value to the public should be constantly increased. It has been and always will be the very foundation of our professional work. . . . When the day comes that we feel that we have neither time nor inclination to make "domiciliary visitations," as one eminent physician calls visiting the sick, we can all "fold our tents and silently steal away." The people would have nothing of us and from top to bottom we will be in the discard. . . .

With the passing of the preceptor there also passed a powerful influence for the directing of young men into general practice. Do not waste sympathy or pity on the country doctor. He doesn't need it. I had six years of it and know whereof I speak. He has many things that compensate him for the loss of the pleasures and comforts of the city. I have never thought the problem was one of economics, for if a doctor is a financial failure in the country he would be in any place. He may not have the opportunity for fees that run from \$100 to an unnamed amount, but he

will be able to do as well financially as the average city physician. Why should young men back up from the hardships of country practice? Medicine is a profession of service and not a commercial venture, and any attempt to make it so will end in discredit and usually failure. True, we must live by our work, but in my life I have never seen the man who works for the joy of it, go hungry or his children begging for bread. It is the law of life that he who gives most gets most and the men who give most are usually the men who are accomplishing most in every walk of life. I have often thought if these young men knew the joy of living away from brick walls and stone walks, in God's open country where the sunshine and clear air and broad green sweeps of nature thrilled them at every turn, more of them could be country doctors.

Our relationship as a group to other groups and to the whole body politic gives rise to differences, friction and criticism because of regulations which we think restrict our freedom of action and hamper our effort for the common good. We are the autocrats of the sick room. We are used to saying, "This is the proper course and it must be followed," and we are obeyed, but we cannot carry this same autocratic spirit into the relationship of our group to the public. Attempts to do this bring the friction, motives are questioned and misunderstandings arise that defeat efforts for the public good. I have no fears for the individual physician, however autocratic; as a rule his heart is right. His earnest service brings him the gratitude of the individual patient, but multiplying this one thousand times or ten thousand times does not give you a true picture of the relationship existing between the profession and public. The psychology of individual and mass reaction to similar stimuli is entirely different and a lack of appreciation of this fact has led us to be indifferent to its possibilities and its legitimate use. . . .

The simplest primary division for effective work is teaching, curative medicine and preventive medicine. We should not lose sight of the fact that the division is for the more effective use of our time and knowledge, not an actual division. We are all of one profession. . . . Teaching and prevention of public health functions must always be government controlled, for the reason that the funds must be forthcoming and only the government can supply them in sufficient amounts. It is a debatable question as to how far government control should go, but there can be no question that they should apply the funds.

This being true, we should co-operate with and support the public health physician. Up to this point we have no disagreement, but when the public health worker begins to function as a curative medical man and employs lay workers who are many times, in fact, practicing medicine, we must question his right to do so and insist that all who care for the sick or presume, with the authority of the State behind them, to give advice in the care of the sick shall have the same qualifications. The public good demands it.—W. J. Kay, The American Medical Press.

Actinomycosis—To the Editor: I am endeavoring to make a complete study of the distribution of human actinomycosis in this country. The number of cases reported in the literature is surprisingly small, and I know that the disease is not so rare as is sometimes thought. I shall greatly appreciate hearing directly from any one who has had experience with this disease, and desire to know concerning case histories the following: age, sex, occupation, residence, state in which the disease was contracted, location of lesion, duration of symptoms, and any special points of interest connected with the treatment, outcome of the disease, or necropsy findings.—A. H. Sanford, M. D., Mayo Clinic, Rochester, Minnesota.

WISCONSIN BARS OUT FILLED MILK— SUPREME COURT RULES AGAINST "HEBE" AND OTHER MILK COMPOUNDS

By legislation and court decisions the people are winning the fight against all so-called milk compounds. The decision in Wisconsin Supreme Court, July 20, in the now celebrated "Hebe" case brought by the Carnation Milk Products Company and the Hebe Company, upheld the State law forbidding the manufacture and sale of the compounds of skimmed milk and vegetable oil. The Carnation Milk Products Company, plaintiffs in the case, had sought to enjoin J. Q. Emery, dairy and food commissioner, from enforcing the law as against their product known as "Hebe."

This much advertised compound, which the court found to be similar in taste, odor, appearance, consistency and manner of packing to evaporated milk, has been manufactured by the Carnation company and sold to its subsidiary, The Hebe Company, for five years. It has been advertised by certain dealers in the newspapers of Wisconsin as "milk" or "compound of milk"; and has been sold by a number of retailers in Wisconsin as "milk" or "evaporated milk." This and other compounds are shipped out of the State and advertised and sold by many dealers in other States as substitutes for milk. Labels on the cans of some of the compounds suggest that this product is practically equivalent to or better than genuine evaporated milk.

The Supreme Court based the right of Wisconsin to outlaw "Hebe" and other milk compounds on the police power of the State, and declared the law valid for three reasons: (1) Because the law is intended to prevent fraud and deception. (2) Because it protects public health and welfare. (3) Because it promotes the general prosperity by preserving a great industry of the State.

Skimmed milk is all right in its place, it seems, and coconut oil all right in its place, but the mixture lacks the food value of whole milk. The latest investigations of Professor H. Steenbock of the University of Wisconsin prove that when milk is skimmed by the commercial separator only one-tenth of the fat-soluble vitamin is left in the skim milk. Coconut oil has none of this necessary element for child growth.

Justice Charles H. Crownhart, who wrote the decision and the accompanying statement of fact, pointed out that the history of legislation relating to filled milk was most persuasive. "It will be seen," he said, "that the compounds have been considered inimical to public welfare by a large portion of the people of this country." He pointed out that thirty-three States had adopted standards for condensed or evaporated milk; that the manufacture and sale of filled milk had been absolutely prohibited in New Jersey, New York, and Wisconsin; that five other States had prescribed standards for condensed or evaporated milk that in effect prohibit filled milk; and that three States had passed laws which permit filled milk to be sold as "imitation milk." Justice Crownhart found an even more emphatic expression of the people's wishes in the Voight Filled Milk bill now before Congress, which had passed the House 250 to 40.

"The compounds," he said, "are in exact imitation of the genuine evaporated milk. They are produced and sold by the manufacturer cheaper than the genuine. They are susceptible of being sold to the public for the genuine at the same price. They are, therefore, capable of being used for fraudulent purposes and to deceive purchasers. If used as a substitute for milk, the public health may be impaired, not because the compounds are in themselves deleterious, but because they lack in certain food elements essential to a well balanced dietary." The Justice showed himself a master of sarcasm in quoting the advertisements of coconut

oil compounds, which spoke of a "delicious and nutritious new milk product," "Prepared in the rich dairying districts of Indiana and Wisconsin," "animal fats extracted and then enriched with sweet, edible, highly refined coconut oil." "Other advertisements," Justice Crownhart declared, "are equally well calculated to convey the idea to the public that pure, fresh cow's milk from Wisconsin has been enriched and improved by the injection of sweet, edible, highly refined coconut fat."

Justice Crownhart maintained that the power of the State could be exercised for the prosperity and for the "preservation of a great industry of the State against injury in markets outside." He referred to Florida's winning fight to defend her great orange industry.

In regard to Wisconsin's right to protect her dairy industry he said: "The principle of allowing these compounds to be manufactured and sold followed to its logical conclusion will lead from 'filled' milk to 'filled' butter, from 'filled' butter to 'filled' cheese, and finally we have the 'synthetic' cow taking the place of the domestic animal of the farm. A great industry of a State will decline, a victim of 'national advertising' of cheap and deceptive substitutes." Thus the great dairy State of Wisconsin delivered itself mightily in protection of public welfare, and the prosperity of the State by defending its fundamental industry—dairying. Dairy and consumers' interests have taken the fight against the filled milk traffic into the national arena. More than a year ago they put their forces behind a bill introduced by Congressman Edward Voight of Wisconsin, H. R. 8086, prohibiting the movement in interstate and foreign commerce of commercial filled-milk preparations. This bill has passed the Lower House by a vote of 250 to 40, and is now in the Senate, where hearings will be closed by the Committee on Agriculture the week of August 1.

Abrams and His Methods—The office of the Journal and of the State Society continues to receive inquiries about the methods of Dr. Albert Abrams. Physicians, of course, are perfectly familiar, through the numerous articles in various medical journals, with Dr. Abrams and his methods. Members of the State Society have been informed before that they can secure the digest of the medical literature upon the subject by applying to the secretary of the American Medical Association, 535 North Dearborn street, Chicago.

That part of the public who are interested in forming their own opinions as to the merits or demerits of the man and his methods, and who are unwilling to "take the advice of physicians" upon the subject, are gradually being informed by various articles in the public press. One of the most exhaustive and drastic criticisms, amounting to a condemnation of the man and his methods, and giving reasons for conclusions, is found in the January number of Hearst's International. The article is by Mr. DeKruif, who has come into considerable prominence recently as a popular writer on medical subjects and medical men.

Physicians, of course, will not lose their sense of humor over this situation.

Medical Board Examinations—The National Board of Medical Examiners announces the following dates for its next examinations—Part I—February 12, 13 and 14, 1923; Part II—February 15 and 16, 1923. The fees for these examinations have been continued at the reduced rate for another year. Applications for these examinations must be forwarded not later than January 1, 1923. Application blanks and circulars of information may be obtained from the Secretary of the National Board, Dr. J. S. Redman, Medical Arts Building, Philadelphia, Pa.

COUNTY NEWS

ALAMEDA COUNTY

San Leandro Sanitarium—The San Leandro Hospital, according to Marion F. Stirling, M. D., owner and manager, is designed to furnish medical, nursing and personal service accomodation, particularly for elderly people suffering from chronic illnesses and who are in moderate circumstances. The sanitarium at present can accommodate twelve patients. Patients who desire may have their own physician in consultation, and they will be provided by the hospital with all other care. The prices in the hospital, including everything, are from \$40 to \$150 a month.

CONTRA COSTA COUNTY

Contra Costa County Medical Society (reported by L. St. John Hely, secretary)—The annual meeting of the Contra Costa County Medical Society was held at the Hotel Oakland Saturday evening, November 25. The following officers were elected for the ensuing year: President, H. L. Carpenter; vice-president, G. M. Bumgarner; secretary-treasurer, L. St. John Hely.

The minutes of a very successful year were read and approved.

A very enjoyable evening was spent by the members and their wives and guests. After the banquet, all adjourned to the Orpheum. The following members and guests were present: Dr. and Mrs. C. R. Leech, Mrs. Viglioni, Miss Nora Loveless, Cunningham, Spalding, Clara Spalding, Vistal, Miss Agnes Driscoll, Bumgarner, Fraser, Hely, Carpenter, C. L. Abbott, Denninger-Keser.

FRESNO COUNTY

Fresno County Medical Society (reported by Thomas F. Madden, secretary). The regular meeting of the Fresno County Medical Society was held at the Commercial Club on December 5, with an excellent attendance. Stanley Stillman of the Stanford Medical School spoke on the subject of "Surgery of the Gall Bladder." The speaker's wide experience in this field of surgery made his talk an unusually instructive one. Stillman's paper was discussed by Pettis, Sheldon, and Ransom.

The following nominations were made for the year 1923: President, Thomas F. Madden; first vice-president, Georgia Thompson; second vice-president, C. O. Mitchell; secretary, John D. Morgan; assistant secretary, J. A. Montgomery; treasurer, Union National Bank.

The names of Edward O'Neill and Otto P. Deidrich, of Fresno, and E. S. Garrett, of Lemoore, were proposed for membership.

E. R. Scarboro, A. A. Callaway and E. A. Larson were elected to membership.

The regular meeting of the staff of the General Hospital of Fresno County was held at the hospital December 12, 1922, at 8 p. m. The program was in charge of the Obstetrical Service, and an interesting discussion was had on the "Mental Disturbances of Pregnancy." Cases were presented by Wiese and discussed by Kjaerbyr, Tupper, Willson, Bell, and Barrett.

Fresno County Hospital Changes Name—By action of the Board of Supervisors of Fresno County, the name of the County Hospital has been changed and will hereafter be known as the General Hospital of Fresno County.

Are School Nurses Practicing Medicine—It is reported that the parents of the school children in Selma were circularized and advised that the Schick test for susceptibility to diphtheria would be given by the school nurse if the parents' consent was

given. About a third of the parents gave their consent and school children in Roosevelt and Jefferson schools have been given the test. It is reported that those children that gave no reaction were declared immune, and those in which the reaction was positive were advised to go to their family physician for "vaccine." If a school nurse is competent to apply the Schick test why draw the line at using "vaccine"?

LOS ANGELES

Seaside Hospital (Long Beach) Should be Congratulated—It is reported that the Long Beach Osteopathic Association has passed the following resolution:

Whereas, The group of medical physicians who own and control Seaside Hospital have excluded osteopathic physicians and their patients from said hospital; and

Whereas, It has happened that patients of osteopathic physicians have been injured in street accidents and taken to Seaside Hospital without knowing that they could not have the physicians of their choice when there, and those in charge of said hospital have refused to call osteopathic physicians for said patients; and

Whereas, The Long Beach hospital does admit osteopathic physicians on a basis of equality with physicians of other schools, and the same courteous treatment is extended to them and their patients as to all others; therefore, be it

Resolved, by the Long Beach Osteopathic Association, that we recommend and urge our patients and friends to patronize the Long Beach hospital whenever they may require hospital service, and that this resolution be spread on the minutes of this association and published to the people of Long Beach.

Seaside Hospital is an incorporated institution owned and operated by about one hundred physicians of Long Beach. Upon the recommendation of the League for the Conservation of Public Health, this hospital was recently accredited by the Council of Medical Education and Hospitals of the A. M. A. for interne purposes, and is a splendid hospital. Physicians of the staff and board of directors are to be congratulated upon taking a stand which prevents the practice of sectarian medicine in their institution and permits practice only by physicians who hold the doctor of medicine degree from an accredited university or school of medicine.

Methodist Hospital—The staff of the Methodist Hospital of Southern California is fully organized and functioning splendidly. Its by-laws have recently been adopted by the staff and by the board of directors. The team work of the men of the staff with the board of directors and those in charge of the hospital has been responsible for the rapid strides made by this institution and in bringing it to an accredited standing.

The regular staff meetings are held the third Monday evening of each month. The executive council of the staff holds a weekly luncheon meeting and the staff committee from the board of directors meets with the executive council once a month.

There has been installed recently an X-ray deep therapy equipment, which is rendering splendid service under the supervision of Dr. Rex. Duncan. Our diagnostic X-ray Department under Dr. McKee is rapidly extending its work and usefulness.

College of Medical Evangelists of Los Angeles Receive Class A rating—It is of particular pleasure to the Journal and undoubtedly to all physicians of the State to announce that the Council on Medical Education and Hospitals of the American Medical Association has granted the Class A rating to the College of Medical Evangelists. California now has three Class A medical schools and none of any other kind. The dean and members of the

faculty of the College of Medical Evangelists are to be complimented upon their sustained efforts to secure this Class A rating and are to be congratulated that they have at last reached their goal.

MONTEREY COUNTY

Monterey County Medical Society (reported by T. C. Edwards, secretary)—The regular meeting of December 1st was devoted to the election of officers, which resulted as follows: President Martin McAulay of Monterey; vice-president, Wiley Reeves of Salinas; secretary, T. C. Edwards, Salinas; treasurer, Wm. H. Bingaman of Gonzales; censor, J. A. Berk of Salinas; delegates to State Society, Charles T. Bullard, King City, and Martin McAulay, Monterey.

The Rockefeller Foundation has offered to cooperate with the supervisors in the appointment of a full-time health officer and sanitary inspector for this county. It is understood that no definite action has been taken as yet.

PLACER COUNTY

Placer County Medical Society (reported by Robert A. Peers, secretary)—The Placer County Medical Society held its annual business meeting at the Masonic Temple, Auburn, Cal., Saturday evening, December 2, 1922, Charles J. Durand presiding.

The following officers were elected to serve for 1923: President, Charles J. Durand, Colfax; vice-president, H. N. Miner, Blue Canon; secretary-treasurer, Robert A. Peers, Colfax; assistant secretary, Earl E. Ostrum, Loomis. Delegate to the State Society meetings, Earl E. Ostrum, Loomis. Alternate, F. E. McCullough, Lincoln.

Luzerne B. Barnes of Newcastle was elected to membership in the Society.

This being the annual business meeting, no formal literary program was presented. J. G. Mackay of Auburn presented for inspection a patient, ninety years of age, on whom he had performed a plastic operation for epithelioma of the lip. This patient had been operated upon fifteen years previously by R. T. Rooney of Auburn, for epithelioma of the lower lip, and there had been no recurrence until about one year ago. Mackay called attention to the long interval between the first appearance of epithelioma and its recurrence. In spite of the extensive operation required, the patient has a perfect result. Case reports were read by Doctors Mackay, Horne, Kanner, Talbot, Miner, and Peers.

RIVERSIDE COUNTY

Riverside Community Hospital Decides to Admit Osteopaths and Chiropractors—It is reported in an editorial of December 8th in *The Riverside Enterprise* that the board of directors of that institution unanimously passed the following resolution:

"Whereas: The board of directors of the Riverside Community Hospital Association are on record approving the practice, in the hospital, of any reputable and responsible practitioner of the healing art who is licensed by the State of California. It follows, therefore, as a matter of course that any association or organization allied with or accommodated by the Community Hospital Association must comply with this policy of the hospital board."

In continuing, the editorial states: "This resolution reiterates a previous action of the board admitting the newly recognized schools (osteopathic and chiropractic) to practice in the hospital, and it furthermore extends to them equal rights of recognition and practice in any clinic or other department of the hospital may be established or maintained."

"Certainly this action makes the Community hospital an institution worthy of the title 'The Hospital of the Open Door.'"

SAN BERNARDINO

San Bernardino County Medical Society (reported by E. J. Eyttinge, secretary)—The Society met December 5th at the San Bernardino County Hospital, with twenty-five members and ten guests present. The address of the evening was by Nelson W. Janney of Los Angeles, on Hypertension, followed by a general conference with an interesting discussion by the speaker, in which he stated that certain advances in the knowledge of this subject require change in our viewpoint.

SAN DIEGO

San Diego County Medical Society (reported by Robert Pollock)—On November 18, twenty-five members drove to El Centro and attended a joint meeting with the Imperial County Society. This was featured by an excellent turkey dinner at the Barbara Worth Hotel, furnished by the home society which, by the way, understands the art of hospitality. After the dinner, a symposium on diseases of the respiratory tract was presented in the following papers:

Lobar and Broncho Pneumonia—L. H. Redelings.

Diseases of the Pleura—Medical Aspects—Paul M. Carrington.

Diseases of the Pleura—Surgical Aspects—T. O. Burger.

Asthma and Hay Fever—R. A. Kocher.

Foreign Bodies in the Respiratory Tract—A. B. Wessels.

Discussion—C. W. Brown.

A splendid spirit of good fellowship pervaded the meeting, and discussions of the papers were generous and spirited.

The regular scientific meeting of the County Society of November 28, was held in Science Hall, Balboa Park; at which the following papers were read:

Treatment of Diabetes Mellitus—A. F. Willier.

Discussion by Kocher, Pollock, and Willier.

Hyperchlorhydria—Robert Pollock.

Discussion by Doria, Blondin, Willier, and Pollock.

The annual election of the San Diego County Medical Society and the San Diego Medical Library Association was held Tuesday, December 12, in the Library room. On the evening of the same day the Society's annual meeting was held conjointly with the San Diego County Dental Society. Dinner was served at the San Diego Hotel, followed by brief reports from retiring officers, music, and other entertainment.

St. Joseph's Hospital Accredited—All friends of better medicine, better hospitals, and better public health will be pleased to know that St. Joseph's Hospital has been placed on the accredited list of hospitals by the Council on Medical Education and Hospitals of the American Medical Association in the following letter:

"It is a pleasure to inform you that your hospital has been placed on the list of Hospitals Approved for Internships, as recommended by Dr. W. E. Musgrave, chairman of the hospital committee of the State of California, co-operating with our Council.

"Not only do we congratulate you on the splendid progress which you have made, which entitles you to this recognition, but we assure you that we are, like Dr. Musgrave and his committee, interested in the future progress of your hospital and send you our best wishes."

San Diego County General Hospital Accredited—It is also a pleasure to note that the San Diego County General Hospital has been placed on the list of hospitals approved for intern purposes, by the Council on Medical Education and Hospitals of the American Medical Association, in the following letter:

"In recognition of the facilities and arrangements provided by you for the training of interns, as

described and recommended by Dr. W. E. Musgrave, it is a pleasure to say that the Council has placed the San Diego County Hospital on the list of those approved for intern training. Notice to the effect that your hospital is approved will be published in an early issue of the Journal.

"This recognition of your hospital is not to be considered by any means the end of our interest, but we trust that you will always be found abreast of the times and making progress in the work of caring for the sick, as well as for the related duties of training interns.

"You are, of course, familiar with the interest which Dr. Musgrave and his committee have in this hospital and the other institutions of the State and the splendid service which he is rendering, and it will also be the pleasure of this office to serve you on every possible occasion."

SAN FRANCISCO COUNTY

San Francisco County Medical Society (reported by LeRoy H. Briggs, secretary)—During the month of November the San Francisco County Medical Society held four regular meetings conducted by committees on medicine, eye, ear, nose and throat, surgery, and a general meeting. The following abstracts of papers presented have been received: "The Cardiac," by W. J. Kerr, read in the symposium, "May my patient go to operation?" A consideration of the immediate and remote effects of general anaesthesia and operation upon the pathological condition present.

As a general rule it may safely be said that any candidate for a necessary surgical operation who is able to be about and carry on the usual activities of life will have little danger as far as the heart is concerned. This is based on the assumption that the ability of the heart muscle to meet the ordinary demands of life is more important than any other factor in determining the outcome in any given case. Cardiac irregularities and valvular lesions are not contraindications, unless there is associated decompensation, when operations would seldom be justified. Angina pectoris and frequent attacks of Stokes-Adams syndrome would make surgery hazardous. Acute heart-block associated with such infectious diseases as diphtheria, scarlet fever or pneumonia would be contraindications to any surgical measures.

Preoperative treatment is important in cardiopaths. Rest comes first in importance. Elimination should be increased when anasarca is present by purgation and diuretics and by limiting fluids. Digitalis should be employed to full effect, especially when auricular fibrillation is present. Morphine is a valuable drug to promote rest. At the time of operation the position of the patient should be as near that which is most comfortable in bed as possible.

The choice of an anesthetic is of importance. Chloroform is safe only in the hands of a few who are highly skilled in its use. Most of the deaths from its use have come during the early stages, or when there was an intermission of the anaesthesia. Many of these deaths are attributed to ventricular fibrillation. The delayed effects of prolonged chloroform anaesthesia come three to five days afterwards and are due to degenerative changes in the heart muscle.

Ether is safer than chloroform. Its dangerous effects are seen more often with deep anaesthesia.

Nitrous oxide and oxygen is the safest anaesthetic in cardiac cases, but requires more skill in administration.

Local anaesthesia should be employed whenever possible, unless the patient is suffering from angina pectoris or other conditions where psychical factors may influence the outcome.

"Localization of Foreign Bodies in the Eye by Means of Markers in the Conjunctiva," by Kaspar

Pischel; read before the committee on eye, ear, nose and throat.

Dr. Kaspar Pischel demonstrated his method of localization of foreign bodies in the eye by means of markers in the conjunctiva.

Advantages: No extra apparatus required, accuracy independent of the exact fixation of patient's eyes. Localization can be made immediately after development of the plate.

The doctor plead for immediate removal of a foreign body and showed the dangers of delay by the history of a case.

St. Joseph's Hospital—Impressed by the earnestness and success of last year's progress, St. Joseph's Hospital staff of San Francisco unanimously re-elected the following officers on December 13:

President, Dr. A. S. Musante; vice-president, Dr. William Reilly; treasurer, Dr. F. C. Keck; secretary, Dr. L. Overstreet, and financial secretary, Dr. R. F. Grant.

Papers were read by Wm. Quinn on "Medical Notes from Boston, and R. F. Grant on "Johnston-Wickett Clinic."

Case reports were presented by A. S. Musante, "Pernicious anemia"; D. Stafford, "Carcinoma of liver, stomach and intestine"; William Reilly, "Broncho-pneumonia and mitral stenosis," and William Quinn, "Carditis."

At the November meeting F. Keck gave a witty talk on "Honolulu and Ship-a-fire Experience," and H. A. L. Ryfkogel an illuminating address on "The Acute Abdomen."

Case records were read by J. Newton, "Cystic carcinoma of the uterus and acute appendicitis with peritonitis," and by P. Collischonn, on "Nephritis and endocarditis."

SAN JOAQUIN COUNTY

San Joaquin County Medical Society (reported by Dewey R. Powell, secretary)—The regular monthly meeting of the San Joaquin County Medical Society was held on Friday evening, November 10, in the Receiving Hospital, State hospital grounds, Hudson Smythe presiding. The members of the San Joaquin County Dental Society were also present in goodly numbers and after calling the meeting to order Smythe introduced Jerry O'Brien, president of the Dental Society, who presided for the remainder of the meeting. The following medical men were present: Drs. Hudson Smythe, Margaret Smythe, Grace McCoskey, R. T. McGurk, Minerva Goodman, F. J. Conzelman, N. E. Williamson, F. S. Marnell, H. E. Sanderson, H. J. Bolinger, I. Thompson, B. F. Walker, J. G. Vischi, A. W. Crary, A. H. McLeish, E. L. Blackmun, D. F. Ray, N. B. Gould and D. R. Powell, with Albert Rowe as guest and speaker of the evening.

O'Brien first presented Guy S. Millberry, dean of the dental college of the University of California, who spoke on the subject of "Focal Infection" from the dentist's viewpoint. Millberry in his very pleasing manner emphasized the fact that while the study of bacteriology has a fertile field in the oral cavity the teeth must not be blamed for all systemic conditions. He quoted Mayo, stating that 90 per cent of all deaths were due to infections and sequelae. Also that 80 per cent of the infectious diseases of childhood were secondary to conditions in the mouth and nasopharynx. Tooth disintegration may be very insidious and extend over a long period of time. The remedy is in caring for caries in children's teeth. The dentist should have the final decision in determining which teeth should be removed and should follow a conservative course wherever possible, as artificial dentures have an efficiency of only 30 per cent. He emphasized the fact that crowned teeth are not necessarily dead or doomed and that it is moreover a physical impossibility to remove all of the infected area surrounding a tooth. When operative work is imperative the two main types of focal infection from the

dentist's standpoint are, first, carious teeth together with apical abscess and, secondly, pyorrheal abscess of the periodontal type.

The next speaker of the evening was Albert Rowe, internist, who spoke on "Focal Infections" from the internist's point of view. He emphasized the fact that focal infection has served as a ground for closer co-operation between the dental and medical professions. He explained Rosenau's "Theory of Elective Location" as, for example, streptococcus causing appendicitis, when cultured and injected into animals will again cause appendicitis. He spoke of the commoner conditions which are due to focal infections, mentioning the fact that acute rheumatic fever always arises from a streptococcus focus of low virulence, usually located in the tonsils. He then spoke of endocarditis, myocarditis, acute chorea, goiter, myxedema, acute appendicitis, cholecystitis, acute gastric and duodenal ulcer, diabetes, osteomyelitis and acute nephritis, all very often due to focal infection. For treatment he recommended radical removal of the focus of infection whenever it could be discovered.

The committee on admissions reported favorably on the application of H. Kaplan for admission into the society. Their report was unanimously adopted and the secretary instructed to notify Kaplan of his election.

SANTA BARBARA COUNTY

Santa Barbara County Medical Society (reported by A. C. Soper, Jr., secretary)—A special meeting of the society was called on November 8, 1922, to hear an address by Edward C. Rosenau, M.D., of the Mayo Clinic, on the general subject of research experiments in focal infections.

President Mellinger presiding; present, nineteen members; dentists, Allen, Angle, Hicks, Lyman, C. R. Pierce and Sutton, the hospital interns and nurse corps.

Mellinger spoke briefly on the lamentable results of the voting here on the obtuse triangle, and then introduced Rosenau.

Rosenau discussed with lantern slides and black-board drawings the pathological results of focal infection experiments on animals, touching on the direct localization of specific germ strains in kidney tissue after introduction of pus cultures into the tooth cavity of the animals concerned, discussed the value of removing devitalized teeth in this connection and, finally, told of experiments in epidemic encephalitis, with attacks of hiccup, the same manifestations being produced in rabbits.

Discussion and questions followed, participated in by Sansum, Farman, Allen (D. D. S.), H. F. Pierce, Bagby, Stevens, Soper and Mellinger.

A regular meeting of the society was held November 27. Vice-President Schurmeier presiding in the absence of the president. Present, twenty-one members, three interns.

Case presentation by George W. Jean: 17-year-old girl with bilateral "conical cornea"; had vision for fingers 3-10 feet away before operation; right eye iridectomy followed by trephining; now has about one-half vision; left eye to be later operated. Had typhoid fever ten years ago; well-nourished, well-developed girl.

Paper by N. H. Brush on "Cerebral Syphilis," discussed by Nazum, Ullman, Culler, Farman, Stevens and Jean.

Talk, with diagrams, on "Emergency Treatment," of Shock, based on war experiences with the British First Army, by H. J. Ullman; discussed by R. W. Brown, Marian Williams, Allen Williams and Means.

At the meeting of December 11, papers were read by L. W. Hotchkiss on "Surgical Treatment of Inguinal Hernia in Adults," and Charles S. Stevens on "Acute Head Injuries." President Mellinger announced that the program committee would be

called together to arrange for the annual dinner in January, and that the Cottage Hospital would hold a clinic day on the same date.

SANTA CLARA COUNTY

Santa Clara County Medical Society (reported by E. P. Cook, secretary)—At a special meeting of the society Herbert Allen Johnston of Anaheim, Orange County, discussed group medicine.

Albion W. Hewlett of Stanford University Medical School spoke of the proposed changes and needs of Stanford Medical School, its clinics and hospitals. Heretofore the classes in medicine have been limited to twenty-five students, but it is hoped that this number may be raised to fifty. The million dollar campaign for medical funds will be brought to a close within a short time and Stanford Medical School with its additional endowment fund will become a more efficient medical center. The professional men about the bay are working earnestly for the necessary funds to carry the campaign to a successful close. Among the members of the Santa Clara County Medical Society are many graduates of Cooper and Stanford Medical College and all of them and many others are interested in making Stanford Medical School bigger and better.

H. A. Dahleen, in reviewing "Unilateral Renal Tuberculosis" (Santa Clara County Medical Society Bulletin) states:

"About 50 per cent of the patients whose ureter was ligated, and the end sterilized with the actual cautery at the time of nephrectomy, had primary healing of their wounds.

"In an additional 25 per cent of patients in whom this procedure was followed, the healing was complete in three to four weeks with no drainage later on. The results of partial ureterectomy, at the time of nephrectomy for unilateral renal tuberculosis without stricture of the ureter were not so good when measured by the wound healing. This was particularly true where drains had been inserted.

"The best procedure to follow on strictured ureters seems to be to remove them at a point distal to the stricture at the time of nephrectomy. In the past the procedure of choice was to bring the ureter to the surface of the wound and fasten it there in order that drainage might take place to the outside. This was often hard to do, because of the immobility and fragility of the ureter. For this reason a small rubber tube was drawn over the cut end of the ureter and fastened to the wound, thus affording conduct of the contaminating material from the ureter to the surface without infecting the wound.

"However, in view of the large percentage of primary healing of operative wounds when the ligation and cautery is used, this now seems to be the method of choice.

"In all cases of unilateral renal tuberculosis, nephrectomy should be done as early as possible. Tuberculosis of the bladder is secondary to renal involvement and cures spontaneously following removal of the infected kidney. Persistence of the infection in the bladder is only rarely due to a remaining tuberculous ureter.

"Tuberculosis of the ureter is likewise secondary to renal tuberculosis and the ureter will usually become converted into a cicatricial fibrous cord following removal of the kidney.

"In all cases in which renal tuberculosis is suspected, there should be a vigorous search for the bacilli in the urine. If they are found, the patient should have the urine collected from each kidney separately and examined for pus and bacilli. If the infection is found to be unilateral the diseased kidney should be immediately removed. If this is not done the opposite kidney is certain to become infected, and the chances for a cure are past."

SONOMA COUNTY

Sonoma County Medical Society (reported by N. Juell, secretary)—The Sonoma County Medical Society met on Thursday, December 14, with fourteen members and three visitors present. New officers were elected as follows: President, H. S. Rogers; vice-president, A. A. Thurlow; secretary, N. Juell; treasurer, R. M. Bonar; censor, J. H. McLeod, all of Santa Rosa. S. Z. Peoples was elected delegate to the State convention which will meet in San Francisco in June.

The speakers were Alvarez and Hoag of San Francisco, who spoke on "The Diseases of the Stomach and Intestines."

STANISLAUS COUNTY

Stanislaus County Medical Society (reported by R. E. Maxwell, secretary)—The regular election of officers was held December 8, at the Hotel Modesto, and the following officers were elected: President, E. R. McPheeters, Modesto; vice-president, E. T. Hagadorn, Oakdale; secretary-treasurer, R. E. Maxwell. J. A. Young was elected censor to take the place of O. I. Bemis.

Following the election various matters of society business were discussed, among which were professional cards, physical examination of high school students and matters influenced by the recent election.

Medicine and the Public Press

Physicians, Educate Yourselves!—Under this title in the November issue of the *World's Work* the editor again avails himself of the opportunity to criticize the medical profession. He bases this criticism primarily on some garbled statistics regarding childbirth. He seems to think that obstetrics and gynecology are the same thing and considers gynecology as being largely an American science. In discussing the reasons for the continued mortality in confinements, the editor states:

"Why is it that American women do not profit from the progress achieved on this side of the Atlantic? The blame rests in a quarter where one would least expect to find it, for the practicing physician is himself chiefly to blame; he does not take the trouble to train himself in the use of all the procedures which medical science has prepared for him. To those who are in the habit of upholding the rural section as vastly more civilized than the city it is something of a shock to discover that, in so many of the things that comprise modern progress—education, sanitation, the abolition of child labor, for example—the country is woefully behind the town. And in this respect again the advantage is entirely on the side of the city. The one place where a woman can face maternity with the greatest confidence of survival is in one of the great maternity hospitals of New York, Chicago, and any other of the large centers of population. The most dangerous place is in one of the small homes of the country or village, and the reason is that the least skilful obstetrician is the old-fashioned 'family practitioner' who, in many ways, is such a useful and honorable support of the small community. The trouble is that this practitioner does not school himself sufficiently in the technique of his trade."

The rest of the editorial is devoted to praising one particular post-graduate school of instruction in obstetrics and blaming the ignorance of the physician upon the fact that most of them do not take advantage of the post-graduate opportunities offered by this school. He quotes "statistics" showing that more students attend that school from large cities than from rural communities and from these "statistics" concludes that physicians in rural communities are not prepared to render adequate service in obstetrics.

ACKNOWLEDGMENT OF REPRINTS

Alderson, Harry E., Onychiauxis and thyroid therapy. Reprinted from the *Archives of Dermatology and Syphilology*, May, 1922, Vol. V, p. 603.

Belt, A. E.

See Mathe, Charles P.

Cordes, Frederick C.

See Franklin, Walter Scott.

Duncan, Rex, Primary epitheliomata of the corner with treatment. Reprinted from *The American Journal of Ophthalmology*, Vol. IV, No. 7.

Recent developments in radio-therapy. Reprinted from the *California State Journal of Medicine*, Vol. XX, No. 9.

Franklin, Walter Scott, and Cordes, Frederick C., Bilateral lymphosarcoma of the orbit with intermittent exophthalmos. Reprinted from the *Transactions of an International Congress of Ophthalmology*, held in Washington, D. C., April 25 to 28, 1922.

An unusual orbital tumor. Reprinted from *The Journal of the American Medical Association*, September 23, 1922, Vol. 79, pp. 1038-1041.

—and Horner, Warren D., Hernia through Tenon's capsule with extrusion of orbital fat a birth injury. Reprinted from the *American Journal of Ophthalmology*, August, 1922, Vol. 5, No. 8.

Gunn, Herbert, Councilmania lafeuri not a new amoeba. Reprinted from the *Journal of Parasitology*, September, 1922, Vol. 9, pp. 24-27.

Horner, Warren D.

See Franklin, Walter Scott.

McArthur, N. T., Lethargic encephalitis. Reprinted from the *California State Journal of Medicine*, August, 1922.

Mathe, Charles P., and Belt, A. E., A case of bilateral pyelitis due to the bacillus pyocyaneus. An unusual kidney infection diagnosed through ureteral catheterization. Reprinted from the *Journal of Urology*, Vol. 8, No. 4, October, 1922.

Morton, A. W., Jejunostomy in ileus and peritonitis. Reprinted from *Western Medical Times*, Denver.

Pottenger, F. M., Some observations on therapeutic nihilism. Reprinted from *Medical Record*, September 19, 1921.

The relative value of laboratory and clinical methods of study in the diagnosis of tuberculosis. Extracted from the *American Journal of Medical Sciences*, September, 1921, Vol. CLXII, No. 3, p. 352.

Profant, Henry J., Chronic suppurative parotitis with acute exacerbations. Reprinted from the *California State Journal of Medicine*, September, 1922.

Rockey, A. E., Plastic canalization of the mandible for the retention of prosthesis. Being part of an illustrated lecture on "Plastic Surgery of the Face and Jaws" given before the twenty-ninth annual session of the Oregon State Dental Association, Portland, Ore., December 7, 1922.

Selfridge, Grant, Disturbances of metabolism and its relation to certain disorders of the respiratory tract (a preliminary report). Reprinted from *The Laryngoscope*, St. Louis, April, 1922.

Shepardson, Ruth Thygeson, Preliminary report on an investigation of the "Provocative Wassermann" controlled by the ice-box method. Reprinted from the *California State Journal of Medicine*, March, 1922.

Sumner, Percy, Remarks on refraction. Reprinted from the *American Journal of Ophthalmology*, September, 1922, Vol. V, No. 9.

Wesson, Miley B., Rabies. Reprinted from the *New York Medical Journal* for October 28, 1916;

A simple apparatus for intravenous administration of "606," and technique of using same;

Epidemic cerebrospinal meningitis. Reprinted from the *New York Medical Journal*, March 22, 1913;

Clinical report of a case of rabies treated with neosalvarsan and quinin, together with a case of lyssophobia. Reprinted from the *Journal of the American Medical Association*, January 17, 1914, Vol. LXII, p. 204;

Henoch's purpura. Reprinted from the *Medical Record*, December 1, 1917;

Sunstroke and its treatment. Reprinted from the *Medical Review*, Vol. LXII, No. 8, 1913;

An anatomical and embryological study of the perineum. Reprinted from the *California State Journal of Medicine*, August, 1922;

The development and surgical importance of the rectourethral muscle and denonvilliers' fascia. Reprinted from the *Journal of Urology*, Vol. VIII, No. 4, October, 1922;

Anatomical, embryological and physiological studies of the trigone and neck of the bladder. Reprinted from the *Journal of Urology*, Vol. IV, No. 3, June, 1920;

—and Young, Hugh H., The anatomy and surgery of the trigone. Reprinted from the *Archives of Surgery*, July, 1921, Vol. III, pp. 1-37.

BOOK REVIEWS

The Propaganda for Reform in Proprietary Medicines, Vol. 2, 1922. Containing reports of the Council on Pharmacy and Chemistry, and contributions from the A. M. A. Chemical Laboratory, and from the Journal of the American Medical Association. Cloth, 603 pages, with illustrations. Chicago: American Medical Association, 1922.

The present book is the second volume of the "Propaganda for Reform in Proprietary Medicines." The first volume ran through nine editions. The ninth edition contained (1) the most important reports of the Council on Pharmacy and Chemistry, (2) the reports of the A. M. A. Chemical Laboratory, and (3) those articles from the Journal of the American Medical Association which deal with the problems of proprietorship in medicine and the furtherance of rational drug therapy. All of this material covered a period prior to 1917.

The present (second) volume contains similar material covering the period from January, 1917, to April, 1922, inclusive. Like Volume I, this volume is divided into four parts:

Reports of the Council on Pharmacy and Chemistry—This section presents the principles and rules which govern the Council in the examination of medicaments, contains articles and reports bearing on the work of the Council, as well as the most important reports of the Council from 1917 to April, 1922, inclusive.

Reports of the A. M. A. Chemical Laboratory—This, besides presenting the aims and objects of the Association's Chemical Laboratory, also outlines some of the laboratory's work which is of special interest to physicians.

Contributions from the Journal: Proprietary Products—This contains articles which have appeared in the Journal A. M. A. on proprietary preparations and their methods of exploitation.

Contributions from the Journal: Miscellany—In this section are articles dealing with matters of interest to the medical profession but not coming strictly under the classification of proprietary medicinal preparations.

A comparison of the material that has appeared in Volume I of the Propaganda for Reform with that which appears in this volume will reveal the changing conditions in the proprietary medicine field. Many of the reports in the first volume brought out the fact that medicinal preparations were at that time foisted on the profession with false claims of composition; reports of this character are less conspicuous in the present volume. Many of the reports in Volume II deal with unwarranted therapeutic claims, especially those advanced for animal organ preparations, serums, vaccines, preparations for intravenous medication, etc. The present volume will also be found of interest in its portrayal of the changed conditions in proprietary medicines brought about by the World War.

The index in this new volume is, in effect, a bibliography, including references not only to articles in the book but also (a) to articles which appeared in Volume I; (b) to articles on the same general subject in the Journal of the American Medical Association, and (c) to articles appearing in the annual reports of the Council on Pharmacy and Chemistry and of the A. M. A. Chemical Laboratory, but not printed in either volume of the Propaganda for Reform in Proprietary Medicines.

This book is not only valuable for the information it contains, but it is also interesting. It shows up the technique of the artist in the sale of proprietary medicines, tells of his skilful word-pictures that are

sent to the physician as "literature." It makes clear the work of the Council on Pharmacy and Chemistry, the A. M. A. Chemical Laboratory and the Journal of the American Medical Association in their several capacities as servants to the medical profession and as champions of rational medicine. The book should be in every physician's library, and more than that, should be within reach for convenient reference.

Nutrition and Growth in Children. By Wm. R. P. Emerson. 342 pages, illustrated. New York: D. Appleton and Company. 1922.

Topsy "just grew" and she may have been a satisfactory physical specimen, but the whole story of Topsy's ten brothers and sisters would show that half of them had not survived the risk, and the remainder possessed handicaps that careful examination would uncover and ascribe to neglect of common laws which more or less operate against the physical well-being of childhood and end in powerful influences in the way of chronic disability.

Emerson has made a most careful study of the influences attending childhood, home control, food habits, health habits, fatigue and physical defects, and has sought in his important contribution to evaluate these influences and show how they can be directed for good or prevented from becoming permanent handicaps.

The author has studied various group methods of handling children and bringing to bear on them the right sort of ideas. He has shown the responsibility of the parents, the public school teachers, school nurses and doctors, and seeks to co-ordinate and direct all the forces surrounding the child. His book is a carefully worked out plan and is recommended to mothers, teachers and public health nurses, especially as offering a most understanding method by which such work should be begun. Little enough is known of the reaction of the supposedly normal child to the incidents of early years, and Emerson's group method deserves a thorough trial.

P. K. B.

Basal Metabolism—Its Determination and Application. Frank B. Sanborn, M. S., Editor. 282 pages. Boston: Sanborn Company. 1922.

The purpose of this book is stated in the author's preface: "This book is intended to supply the physician and the technician with a treatise that will be a guide in making tests of metabolism and in interpreting the results of the tests." The book is a compilation of articles describing the different methods and apparatus.

Although the author is himself the maker of two of the closed circuit machines, he does not make any odious comparisons or draw any conclusions as to the best type of machine.

J. M. R.

The Healthy Child from Two to Seven. A handbook for parents, nurses, and workers for child welfare. By Francis Hamilton MacCarthy, M. D. New York: The Macmillan Company. 1922. \$1.50.

The home environment and the responsibility of the parents in providing for food, shelter, health, and a guidance in character development are well described in this book.

Too often the baby, as it grows past formula feeding, loses the suggestions of the physician. It sees its doctor only when sick, and the combination of food, play, mental and moral training is too seldom a matter for consultation.

Children grow, too frequently unguided through the years from two to six, and plant seeds of future suffering and breakdowns in disorderly habits, uncontrolled temper and life in an over-stimulating atmosphere.

The controlled and guided children are prepared in the home to meet life—all this the author brings

out vividly and helpfully, and shows that not symptoms but the child is his interest, even when called to the sick child. Such a book is as valuable to the mother of the runabout as that anchor in the troubled seas of infancy—The Care of the Child, by Emmet Holt—has been to thousands of mothers of young infants. In this period of the fitting of the child to its environment, the sensible, thoughtful discussions of problems by so sympathetic an observer of homes and children must be a real service to mothers.

The book is one to be recommended to young mothers for study and consultation. A. B.

BOOKS RECEIVED

The Biology of Death. Being a series of lectures delivered at the Lowell Institute in Boston in December, 1920, by Raymond Pearl. The Johns Hopkins University. Philadelphia and London: J. B. Lippincott Company.

Generalized Pain, Clinical Symptomatology of Internal Diseases, Part II. By Prof. Dr. Norbert Ortner, Vienna. Translated by Francis J. Reisman, with an introduction by Thomas Webster Edgar, M. D., New York. New York: Medical Art Agency.

I Believe in God and in Evolution. By William W. Keen, M. D., Emeritus Professor of Surgery, Jefferson Medical College, Philadelphia. Philadelphia and London: J. B. Lippincott Company.

Massachusetts Takes Legal Steps to Prevent the Enforcement of the Federal Maternity and Infancy Act—The Attorney-General, acting for the people of Massachusetts, has petitioned the United States Supreme Court for leave to file a bill of complaint in a suit between the State and certain government officials, in order to enjoin them from enforcing the Act for the promotion of the welfare and hygiene of maternity and infancy, known as the Sheppard-Towner Act. The defendants named are Andrew W. Mellon, Secretary of the Treasury; Grace Abbott, Chief of the Children's Bureau of the Department of Labor; Charles E. Sawyer, Surgeon-General of the Public Health Service; John J. Tigert, Commissioner of Education.

The original bill of complaint, for which permission is asked to fill, sets forth the following items:

1. That three of the defendants constitute the Federal Board of Maternity and Infant Hygiene. No reason is given for joining the Secretary of the Treasury.

2. That the suit is instituted pursuant to an order of the State Legislature for the purpose of restraining defendants from carrying out the Act.

3. That Congress unlawfully assumed a power not delegated to it, but reserved to the States by the Tenth Amendment to the Constitution, when it passed this Act. The provisions of the law are then set out in detail. The argument is advanced that appropriations made under the Act are for local and not national purposes, that the burden of paying for it falls unequally on the States, and that the sovereign powers of the plaintiff is usurped. Action already taken under the law by the Children's Bureau is also set forth.

The petition, which was filed on September 8, 1922, will be considered at the October term of the United States Supreme Court, which begins on October 2, 1922.

In view of these proceedings, bonding companies for responsive officers of States that have accepted the provisions of this law are likely to consider premature expenditure of State funds dangerous.

EXTENSION WORK

The following additions have been made to the Extension Lecture courses offered by members of the State Society to local societies. (See October, November, February, March, June and July Journals for similar lecture courses.)

H. LISSER, M. D.

240 Stockton Street, San Francisco.

These lectures refer to specific cases with definite results from treatment and are illustrated by lantern slides.

Lecture 1. Adult Myxedema, Childhood Myxedema and Mild Grades of Hypothyroidism.

Signs, Symptoms and Treatment. Illustrated by case histories and lantern slides showing the condition of patient before and after treatment.

Lecture 2. Differential Diagnosis Between Exophthalmic Goitre and Toxic Adenoma.

The importance of this from the standpoint of prognosis and treatment.

Lecture 3. Obesity and Its Treatment by Organo-Therapy.

Different types of obesity: thyroid, pituitary, gonadal and pluriglandular. Illustrated by case histories and lantern slides showing the condition of patient before and after treatment.

Lecture 4. Types of Acromegaly and Indications for Surgery.

X-ray radiation and glandular therapy. Illustrated by case histories and lantern slides.

Lecture 5. Types of Infantilism and Results of Treatment by Organo-Therapy.

Illustrated by case histories and lantern slides.

Lecture 6. Use of Glandular Extracts in Treatment of Menstrual Disturbances, Especially Amenorrhoea.

Illustrated by case histories and lantern slides.

Governmental Regulation and Medical Organization—We all recognize that too much governmental regulation has hampered the physician in the application of his professional judgment in his private practice. The tendency has gone too far toward emphasizing social and criminal aspects and in submerging or overlooking medical aspects. This is particularly true of laws and regulations governing the prescribing and dispensing of narcotics and alcoholics. While not minimizing the social and criminal phases of these problems, we must see to it that the medical viewpoint is realized and appreciated. So often we hear complaints against governmental regulations interfering with private practice, against the establishment of involved regulations requiring time and effort on the part of the individual physician, contemplating innumerable reports and many formalities. And yet we must recognize the need for some regulation for the public good, and that additional and burdensome regulations have sometimes been added because of the wilful or careless acts of a few individual practitioners whose forgetfulness or unscrupulous disregard of professional duty have resulted in hampering and restricting the entire profession.

In the whirlpool of immediate problems we have almost lost sight of the health insurance menace which, like a chamcleon, is constantly changing its form and appearance, but without a lessening of its dangers. We must continually guard against these insidious but superficially plausible schemes whose visionary advocates claim discovery of a panacea for all industrial and social ills. Sugar coated, sentimental, even maudlin appeals, cause rapidly changing eddies and currents in public sentiment. We can safely stand on the policy that such proposals are only appealing fancies until they can be proved to meet the test of medical logic as applied in most effective service toward public advantage and advancement. Likewise the voice of organized medicine must become more positive and convincing in a national way in the guidance of many federal functions in which health, welfare and medical service are concerned.—Bulletin A. M. A.

Pharmacology and Therapeutics

COUNCIL ON PHARMACY AND CHEMISTRY OF THE A. M. A.

(Reported by W. A. Puckner, Secretary)

The November report of the Council on Pharmacy and Chemistry notices a number of new remedies admitted to New and Non-official Remedies, as well as some interesting data about other remedies:

Mercurialized Serum-Lederle for Intravenous Use—Lederle Antitoxin Laboratories;

Silvol—Parke, Davis & Company;

Arsenobenzol—Dermatological Research Laboratories and **Arsphenamine**, Dermatological Research Laboratories: These products are now marketed by the Abbott Laboratories as Neoarsphenamine—D. R. L. and Arsphenamine—D. R. L. The Council has continued the acceptance for New and Non-official Remedies under these names.

Tetanus Antitoxin, Purified—A tetanus antitoxin, concentrated (New and Non-official Remedies, 1922, p. 281), that is also marketed in syringe containers of 10,000 units. E. R. Squibb & Sons, New York.

Staphylococcus Vaccine—This product (New and Non-official Remedies, 1922, p. 306), is marketed in packages of four syringes containing, respectively, 100, 250, 500, and 1000 million killed staphylococcus aureus and staphylococcus albus in equal proportion; in packages of four ampules containing, respectively, 100, 250, 500, and 1000 million killed staphylococcus aureus and albus in equal proportion (with a syringe); and in vials of 5 cc., 10 cc., and 20 cc., each cubic centimeter containing 5000 million killed staphylococcus aureus and staphylococcus albus in equal proportion. E. R. Squibb & Sons, New York.

Streptococcus Vaccine—This product (New and Non-official Remedies, 1922, p. 308) is marketed in packages of four syringes containing, respectively, 100, 250, 500, and 1000 million killed streptococci; in packages of four ampules containing, respectively, 100, 250, 500, and 1000 million killed streptococci (with a syringe) and in vials of 5 cc., 10 cc., and 20 cc., each cubic centimeter containing 1000 million killed streptococci. E. R. Squibb & Sons, New York.

Typhoid Vaccine—This product (New and Non-official Remedies, 1922, p. 310) is marketed in packages of four syringes containing, respectively, 100, 250, 500, and 1000 million killed typhoid bacilli; in packages of four ampules containing, respectively, 100, 250, 500, and 1000 million killed typhoid bacilli (with a syringe); and in vials of 5 cc., 10 cc., and 20 cc., each cubic centimeter containing 1000 million killed typhoid bacilli. E. R. Squibb & Sons, New York.

Typhoid Vaccine Combined, Immunizing—A typhoid vaccine (New and Non-official Remedies, 1922, p. 310) that is marketed in packages of three syringes, one containing 500 million killed typhoid bacilli and 375 million each of killed paratyphoid A and paratyphoid B bacilli, and each of the other two syringes containing 1000 million killed typhoid bacilli and 750 million each of killed paratyphoid A and paratyphoid B bacilli; in packages of three ampules containing, respectively, the same dosages as the three-syringe package (with a syringe); in packages of thirty ampules, hospital size; and in vials of 5 cc., 10 cc., and 20 cc., each cubic centimeter containing 2500 million killed bacilli. E. R. Squibb & Sons, New York.

Staphylo-Acne Vaccine—A mixed bacterial vaccine (New and Non-official Remedies, 1922, p. 314) that is marketed in packages of four syringes, the

first containing a mixture of 50 million each of killed staphylococcus albus, or killed staphylococcus aureus and of killed acne bacilli, the second containing a mixture of 125 million each of killed staphylococcus albus, of killed staphylococcus aureus and of killed acne bacilli, the third containing a mixture of 250 million each of killed staphylococcus albus, of killed staphylococcus aureus and killed acne bacilli, the fourth containing 500 million each of killed staphylococcus albus, of killed staphylococcus aureus and of killed acne bacilli; in packages of four ampules containing the same dosages as the four-syringe package (with a syringe); and in vials of 5 cc., 10 cc., and 20 cc., each cubic centimeter containing 1500 million killed bacteria. E. R. Squibb & Sons, New York.

Colon Vaccine—A colon bacillus vaccine (New and Non-official Remedies, 1922, p. 299) that is marketed in packages of four syringes containing, respectively, 100, 250, 500, and 1000 million killed bacilli; in packages of four ampules containing, respectively, 100, 250, 500, and 1000 million killed bacilli (with a syringe); and in vials of 5 cc., 10 cc., and 20 cc., each cubic centimeter containing 5000 million killed bacilli. E. R. Squibb & Sons, New York (Journal A. M. A., November 4, 1922, p. 1609).

Normal Horse Serum—P. D. & Co.—This product (New and Non-official Remedies, 1922, p. 278) is marketed in packages containing one 10 cc. syringe container (Bio. 50); in packages containing one 10 cc. rubber-stoppered bulb (Bio. 52), and in packages containing one 30 cc. rubber-stoppered bulb (Bio. 53). Parke, Davis & Co., Detroit.

Rabies Vaccine (Cumming)—An antirabic vaccine (New and Non-official Remedies, 1922, p. 290). The virus is prepared by dialyzing a 1 per cent suspension of brain tissues (from a rabbit dying of rabies induced by an injection of fixed virus) against running distilled water until the active virulent virus is destroyed. The treatment is divided into two classes: Mild, requiring fourteen doses; severe, requiring twenty-one doses. One dose, 2 cc., is given daily over a period of either fourteen or twenty-one days. Each package (Bio. 440) consists of seven syringe containers of 2 cc. each (one dose). Parke, Davis & Co., Detroit.

Propaganda for Reform

Abrams' "Oscilloclast"—This is a piece of electrical apparatus which is said to produce vibrations of varying rate. Its use is based on Abrams' theory that "specific drugs possess a like vibratory rate as the diseases for which they are effective." Instead of using a drug, one starts the "Oscilloclast" going, moves the indicators to the number corresponding to the vibration rate of the indicated drug and applies the instrument to the sufferer, who, it is alleged, then gets the therapeutic action of the drug in question. The "Oscilloclast" is not for sale. It may be leased (for about two hundred dollars) on signing a contract that the instrument will not be opened. Within the past few months, Abrams has been making bids for osteopathic patronage. The followers of the cult have not been slow to respond. The lure of the dollar and the bizarre is irresistible. Many of the lessees of the "Oscilloclast" are individuals who for years have lived in what may be called the twilight zone of professionalism, where it is difficult to distinguish between the visionary with a fad and the quack, or near quack, with a scheme.—Journal A. M. A., November 4, 1922, p. 1626.

Caroid—This is a preparation of papain (obtained from papaya). Caroid was first marketed by the American Ferment Co. and later by Mead, Johnson & Co. For a considerable time, the Council on Pharmacy and Chemistry had caroid under consideration, and in the end rejected the product on account of its variability. Although caroid was found more active than other preparations of papain, examination showed that the claims for its digestive efficiency were exaggerated. Since the

publication of the Council's report in 1914, Mead, Johnson & Co. do not seem to have made any propaganda for caroid. It is now being promoted by the American Ferment Co., but this firm has not requested a consideration of the product by the council.—*Journal A. M. A.*, November 4, 1922, p. 1629.

The A. M. A. Chemical Laboratory—When, some seventeen years ago, the Council on Pharmacy and Chemistry began its work of turning the light on proprietary medicines, its main concern was to let physicians know the compositions of many of the proprietary medicines widely advertised in medical journals. At that time the exposure of false or vague and meaningless declarations of identity was considered of basic importance. This fact is shown by the name of the Council and by the appointment at that time of many chemists and pharmacists as members of the Council. This need for work which should bring home to the medical profession the essential secrecy of the drug preparations which they were asked to prescribe led also to the establishment of the A. M. A. Chemical Laboratory. The initial reports of the Council gave the medical profession the first definite statement of many proprietaries then advertised extensively. Though many of these proprietaries were offered to the profession as new chemical discoveries, they were, in fact, simple mixtures of well-known chemicals, and their analysis presented little difficulty. As the result of this work of the Council and the Laboratory, most promoters of pharmaceutical specialties know better than to invest money in the exploitation of mixtures, the sale of which would be interfered with when there is a disclosure of its composition. But this does not mean that today the composition of all proprietaries is correctly declared. Proprietaries are still to be found which sail under false colors as to their composition.

The work of the Chemical Laboratory, however, has become more difficult. Instead of analyses of mixtures, the Laboratory has to do with new compounds of novel composition, which do not have the chemical composition or chemical constitution ascribed to them. A report of the Council on Pharmacy and Chemistry of Galyl is an example of the more difficult work now required of the Laboratory. The Laboratory investigated the product, and reached the conclusion that its administration amounted to the giving of arsphenamin (in the form of the sodium compound) with extraneous inorganic material, and thus obviated the need of comparative clinical trials of Galyl with arsphenamin.—*Journal A. M. A.*, November 11, 1922, p. 1690.

Barium Sulphate for Roentgen-Ray Work—A manufacturer of barium sulphate for Roentgen-ray work reported to the Council on Pharmacy and Chemistry that, though its product is free from objectionable impurities and equal to that of other brands on the market, it was confronted with the difficulty that its product, when tested by the standards of New and Non-official Remedies, appeared to contain acid-soluble barium salts. It urged that the phosphate test be omitted in that it showed a noticeable phosphate reaction when barium phosphate is totally absent, but when a non-poisonous and unobjectionable phosphate (such as calcium phosphate) was present. The manufacturer submitted the tests which he employed, which also included a test for the fineness (fluffiness) of the product.

The A. M. A. Chemical Laboratory deemed the objection to the phosphate test well founded and the proposed revision of the test for soluble barium and the "fluffiness" test worthy of consideration. The Laboratory submitted the suggested tests to the firms whose brands of barium sulphate stood accepted for New and Non-official Remedies and also to a group of users of barium sulphate. In general, the manufacturers agreed to the proposed new tests. Many of the users of barium sulphate

held, however, that extreme fineness was not essential. Several objected to the high price charged for some of the very finely divided products. In consideration of the available evidence, the Laboratory recommended to the Council that the "fluffiness" test be not adopted, that the phosphate test be omitted, and recommended in its place a test which will require reasonable freedom from foreign salts, along with tests which shall guarantee freedom from water and acid soluble barium salts and freedom from heavy metallic salts. The Council agreed to the recommendation of the Laboratory, and directed that the recommended revision of the tests be adopted for New and Non-official Remedies, 1923.—*Journal A. M. A.*, November 11, 1922, p. 1687.

Galyl—In 1918, George J. Wallau, Inc., acting as United States distributor for galyl (manufactured by A. Naline, Garenne, France) requested the Council on Pharmacy and Chemistry to consider the product. At that time galyl was stated to be a compound made up of two arsphenamin molecules linked by means of two phosphorus groups. The product was insoluble in water, and for use had to be dissolved in sodium carbonate. It was claimed to be less toxic than arsphenamin, quicker of action on spirilla, and of equal therapeutic value. Later, the composition of galyl was changed. The "new" galyl was stated to be a sodium salt of the "old" galyl. The A. M. A. Chemical Laboratory investigated the new galyl and concluded that, if the compound has the composition claimed for it, it is easily decomposed; that when prepared for administration, either it is partly decomposed into sodium phosphate and sodium arsphenamin or else the original product contains sodium arsphenamin and free phosphate. In either case, injection will probably amount to the administration of phospharsphenamin (if any is present), sodium arsphenamin, sodium phosphate, sodium sulphite, and sugar. In December, 1921, the Laboratory report was sent to the agent and by him transmitted to the French manufacturer. No evidence was received to controvert the findings of the Laboratory that galyl does not have the composition claimed for it. On the other hand, the findings have been supported by independent investigators. Accordingly, the Council declared galyl inadmissible to New and Non-official Remedies because the evidence indicated that it does not have the composition claimed for it; because the therapeutic claims are unwarranted; and because its use under another name than sodium arsphenamine with deceptive claims for its composition is irrational and a detriment to rational therapy.—*Journal A. M. A.*, November 11, p. 1706.

Habitual Use of Barbital—The constant use of even small doses of barbital (veronal) affects the central nervous system. Those taking the drug habitually become much debilitated and seem less able to stand moderate doses. Death has occurred from a 3 gm. dose in addicts. In Great Britain barbital (veronal) has been classified as a poison. Many cases of poisoning occur from its indiscriminate use by the laity.—*Journal A. M. A.*, November 11, 1922, p. 1709.

Aprotein and Aprotine not Admitted to N. N. R.—Aprotein and aprotine are casein preparations marketed as "the foremost tissue and body builders," by the John Norton Co., Columbus, Ohio. Aprotein (formerly designated Aprotein No. 2 Granulated Food Casein) is described in the advertising issued by the John Norton Co. (formerly the Diaprotein Co.) as a "scientifically, specially prepared granulated casein precipitated from fresh skimmed milk, concentrated to a high degree." The Council declared aprotine inadmissible to New and Non-official Remedies because (1) its composition does not agree with a good dietetic casein and was not found to have the composition claimed for it, and (2) it is not only irrational, but also a

hindrance to therapeutics to market a well-known substance like casein under a fanciful name. Apro-
tine, in the information sent the Council, is designated "a sodium calcium caseinate derivative," prepared by precipitating an acid calcium caseinate from skimmed milk by the addition of acid, washing the precipitate, mixing it with sodium bicarbonate, and drying. A comparison of the analyses furnished the Council suggests that aproline and aprotein are the same. The advertising claims suggest that aproline has therapeutic properties, whereas its effects will not differ from those of cottage cheese. The Council on Pharmacy and Chemistry declared aproline inadmissible to New and Non-official Remedies because (1) the statements made in regard to its composition are indefinite and misleading, (2) the therapeutic claims are unwarranted, and (3) there is no evidence to indicate that this casein preparation presents an improvement over casein, N. N. R.—*Journal A. M. A.*, November 18, 1922, p. 1786.

The Pituitary Hormone.—So far the active principle of the pituitary gland has not been isolated. It is possible that the pituitary contains more than one physiologically potent constituent. Perhaps both pressor and depressor compounds are derivable from the gland structures. Abel and Rhuliker have prepared products from the infundibulum which have both vasomotor and oxytocic effects. These investigators believe that if the product is obtained in the pure state, it will be fifty times more active than histamin, and that there is but a single specific hormone in the infundibulum, and that this has both vasomotor and uterus-stimulating properties as well as a powerful effect on the kidneys. The hope of a speedy isolation of this pituitary hormone as a chemical entity is somewhat shattered by the fact that it is unstable in laboratory manipulations.—*Journal A. M. A.*, November 18, 1922, p. 1770.

Adams' Wonder Capsules.—In newspaper advertisements women and girls are urged to call at some local drug store and talk about their ailments with a kind motherly woman of the experience and sympathetic understanding of Mrs. Gene Case. This noted "health advocate" recommends Adams' Wonder Capsules for girls and women who are "troubled with periodical pains, cramps and headache at Menstrual time or who have Neuritis, Neuralgia, stomach, bowel or bladder pain. . . ." The A. M. A. Chemical Laboratory examined Adams' Wonder Capsules and found that the capsules contained the recently introduced drug, benzyl succinate.—*Journal A. M. A.*, November 25, 1922, p. 1876.

Bi-Oxo-Dyn not admitted to N. N. R.—Bi-Oxo-Dyn is put out by "Bi-Oxo-Dyn," Savannah, Ga., according to the information furnished the Council on Pharmacy and Chemistry by W. F. Kennedy, Jr., who states that he is the maker and originator of the product. It is to be inferred that Bi-Oxo-Dyn contains 2 per cent of free (elementary) iodine and 0.1 per cent of hydrastin, 3 per cent of chloral hydrate, 14 per cent of bismuth hydroxid, 1 per cent of menthol in a petrolatum base, and from 0.5 to 1.0 per cent of a compound of succinyl peroxid and loric acid. However, the A. M. A. Chemical Laboratory reported that Bi-Oxo-Dyn contains no free iodine, but that it contains combined iodine in the form of iodid ions and that the presence of hydrogen peroxid or other peroxids could not be demonstrated. The claim is made that Bi-Oxo-Dyn is of inestimable value for injection into the urethra and it is recommended in specific urethritis, uterine hemorrhage and painful cordee.

The Council declared Bi-Oxo-Dyn inadmissible to New and Non-official remedies because (1) the statements of its composition are indefinite, misleading and incorrect, (2) the therapeutic claims are un-

warranted, (3) the name is not descriptive of the composition of the product, and (4) Bi-Oxo-Dyn is a complex irrational mixture the marketing of which is detrimental alike to the interests of the public and of scientific medicine.—*Journal A. M. A.*, November 25, 1922, p. 1867.

Commercial Vitamin Preparations.—No student of the subject of vitamins can fail to recognize the ridiculousness of recent attempts to supply alleged vitamin-bearing preparations as cure-alls. It is doubtful if any latent, not to say evident, avitaminosis is prevalent in this country. Nevertheless, preparations sold to supply this alleged need of vitamins should at least not be fraudulent. E. P. Bailey of the Connecticut Experiment Station has determined the potency of some commercial vitamin preparations as compared with that of dried brewers' yeast. The report stated that apparently many manufacturers are not convinced of the efficiency of their vitamin preparations and, therefore, have added various medicaments of established reputation in therapeutics for good measure and to ensure a reaction of some description. Bailey compared the potency of the products on the reasonable assumption that a preparation which in a 100 mg. dose does not exhibit the potency shown by 100 mg. of a good grade of dry brewers' yeast employed under comparable conditions does not justify a claim of superior therapeutic value as a source of water-soluble B vitamin. On this basis, nearly half of the advertised products failed. Others showed only inferior content of vitamin. A few of the products equalled good brewery yeast in potency and only two or three products among nearly two dozen examined showed any superiority of "concentration" over ordinary yeast.—*Journal A. M. A.*, November 25, 1922, p. 1846.

The "Propaganda for Reform" in Germany.—An effort to establish a German Council on Pharmacy and Chemistry was made in Germany before the war. In spite of the demoralizing effects of the war, efforts are again being made in Germany toward the establishment of such a council. A commission of the Aertzvereinsbund, including such well-known men as Professor Heffter, Klempner, Lenhoff and Schwalbe, has issued an appeal directed particularly against the misleading or fraudulent advertising still so common in many medical journals.

To acquaint the German medical profession with the method of the A. M. A. Council on Pharmacy and Chemistry and the changes that have been brought about in the United States, the Deutsche Medizinische Wochenschrift, of which Dr. Schwalbe is editor, recently published a lengthy article that detailed the organization, aims and objects and accomplishments of the Council.—*Journal A. M. A.*, November 25, 1922, p. 1848.

California Northern District Medical Society (reported by J. R. Snyder, secretary)—The thirty-third semi-annual meeting of the California Northern District Medical Society was held at Sacramento November 14 under the presidency of Nathan G. Hale of Sacramento and with J. R. Snyder of Sacramento as secretary. The scientific meeting was devoted to a program of useful papers by members of the society. At the business meeting the following officers were elected:

President, J. R. Snyder, Sacramento; first vice-president, N. T. Enloe, Chico; second vice-president, J. O. Chiapella, Chico; third vice-president, J. D. Dameron, Stockton; secretary, C. E. Schoff, Sacramento; treasurer, J. O. Stansbury, Chico; board of censors, James H. Parkinson, Sacramento; J. D. Dameron, Stockton; D. H. Moulton, Chico; C. E. Schoff, Sacramento; C. J. Hall, Sacramento.

BUSINESS AND THE BUSY PHYSICIAN

Why not let our advertisers help you?

Medical Illustrating—This issue of the Journal carries the card of Mr. Ralph Sweet, who limits his work to illustrations for medical articles. Mr. Sweet has for a number of years been connected with the University of California Medical School and Hospitals. His work is well and favorably known to physicians in many parts of the State, and all physicians will agree that the use of illustrations that really illustrate would be valuable in many scientific articles. Mr. Sweet's offices are in San Francisco, but he holds himself ready to answer calls from any part of the State.

Physiotherapy—This number of the Journal carries the card of Miss Furscott and Miss Bovill, who are opening offices in the Schroth Building, San Francisco, as physiotherapy technicians. Miss Furscott has for a number of years been the chief technician in the physiotherapy department of Hahnemann Hospital, and Miss Bovill has been doing similar work in another department of the University of California Medical School and Hospitals. Both Miss Furscott and Miss Bovill are members of the California Association of Physiotherapists, and will limit their work strictly to prescriptions of doctors of medicine and under their supervision. The development of ethical services of this character ought to make it easier for physicians to secure the benefits of mechano-therapy for their patients under conditions that should prove more satisfactory to the physicians and the patients than the conditions heretofore existing in this field.

Harry Spiro, M. D., announces a laboratory for the investigation of cardiac conditions, with complete facilities, personnel and provisions for applying any and all methods of diagnosis and prognosis in cardiac affections. Reports, including suggestions as to therapy, will be given to the physician in charge of the patient.

Green Ophthalmic Institute—Aaron S. Green, M. D., Louis D. Green, M. D., Martin D. Icove, M. D., Arthur W. Hebert, M. D., Bertrand S. Frohman, M. D., and Frank A. Trachsler, D. D. S., announce in this number of the Journal the establishment of the Green Ophthalmic Institute, at 853 Hyde street, San Francisco. The institute is for consultation, diagnosis and treatment of diseases of the eye and accessory sinuses.

Ralph B. Scheier, M. D., announces to the medical profession the establishment of a clinic for the investigation of diseases of the lungs. Patients will be carefully studied and a written report submitted to the physician in charge, outlining the diagnostic findings and suggesting therapeutic procedures.

W. A. Baum Co. Inc., New York, are in this month's advertising columns recommending the Baumanometer blood pressure apparatus.

H. B. Nichols, New York, advertises a nasal syphon, and cites an original article in the October number of the Journal for further information.

The Task of the Syphilis Clinic—A. N. Thomson, M. D., in discussing this subject (Medical Times, December, 1922), states that "Fifteen syphilis clinics and hospitals were visited and interviews were held with the doctors and social workers attached to each. This phase of the study revealed many interesting points regarding the inter-relationship of clinic and family case worker in the handling of the venereal disease patient. Chief among these was the clear indication that family case workers do not maintain the proper relationship to the doctors at the clinic."

NEVADA STATE MEDICAL ASSOCIATION NEWS

The following resolution, submitted by the judicial committee, was passed at the recent meeting:

Whereas, The Nevada State Prohibition Act forbids the use of alcohol and alcoholic liquors by the medical profession in the treatment of diseases; and

Whereas, The majority of the physicians of the United States believe that alcohol and alcoholic liquors are a necessary and essential therapeutic agent in the treatment of disease; and

Whereas, This fact has been recognized by the National Prohibition Act by virtue of its provisions permitting the use of alcohol and alcoholic liquors by the medical profession; and

Whereas, There appears to be no sound or valid reason that there should be any difference between the State and Federal law in this respect; now, therefore, be it

Resolved, That it is the sense of this Association that the Nevada Prohibition Act be amended so as to permit the use of alcohol and alcoholic liquors by the medical profession of this State in the treatment of disease; and be it further

Resolved, That the officers of this Association in its behalf use their utmost endeavors at the next session of the Legislature of the State of Nevada to secure an amendment to the Nevada Prohibition Act in conformity with the views of this Association as herein expressed.

Let us hope that it will have some weight when the time comes.

A resolution was also passed recognizing the Women's Auxiliary to the A. M. A., and Mrs. A. R. Da Costa was appointed as State chairman for Nevada.

A committee from the Nevada Nurses' Association was present and asked the N. S. M. A. to endorse a nurses' bill. They presented a draft of the bill they wished endorsed, but the motion to endorse it was withdrawn and a motion made that the chair appoint a committee to confer with a committee from the nurses and agree on a bill to be presented to the Legislature. Motion carried. Committee on this: C. W. West, R. P. Roantree, A. R. Da Costa and H. J. Brown.

A motion prevailed that the chair appoint one member in each county for the purpose of bringing all bills affecting the medical profession to the notice of the legislators.

NEW MEMBERS

Sonoma County: Fulmer, Marguerite J., Sonoma.
San Francisco County: Kuhns, Ralph H., San Francisco.

San Bernardino County: Tisinger, E. L., San Bernardino.

Santa Clara County: Reed, Will J., Hilt; Cavell, R. W., Gardena; McCausland, W. S., Chula Vista.

Stanislaus County: Bryan, G. C., Modesto.

Los Angeles County: Barndt, Milton A., Los Angeles; Cummins, F. A., Los Angeles; Enstam, C. H., Los Angeles; Haskell, P. E., Los Angeles; Hoffman, Ralph W., Los Angeles; Jones, Basil B., Los Angeles; Kahn, Julius, Los Angeles; Long, Frank A., Los Angeles; Ruth, Gerhard D., Los Angeles; Salisbury, Samuel S., Los Angeles; Salisbury, Charles, Los Angeles; Sunde, P. Harold, Los Angeles; Winward, W. F. R., Los Angeles; Walker, Homer M., Los Angeles; Werner, Ewald, Los Angeles; Nichols, Fred C., Los Angeles.

San Diego County: Stromberger, H. H., San Diego; McLellan, George H., San Diego.



JOHN SAYRE MARSHALL

John Sayre Marshall died on November 20, 1922, at his home in Berkeley, Calif., and was buried with military honors on November 23 at the National Cemetery at the Presidio.

Doctor Marshall was born June 26, 1846, at Tunbridge Wells, County of Kent, England. He came to the United States in December, 1858, and located with his parents in Dewitt, Onondaga County, New York State. He served with distinction throughout the Civil War and was mustered out of service June 5, 1865. He graduated from the Fayetteville Academy, Fayetteville, Onondaga County, New York, in 1868 and received his degree as M. D. from the University of Syracuse in 1876. He held an instructorship in dental and oral surgery in the faculty of medicine of the University of Syracuse until 1882, when he moved to Chicago, Ill., and accepted the position of instructor of dental and oral surgery in the faculty of medicine of the Northwestern University. He later organized the present dental department of the University and was Dean and Professor of dental pathology and oral surgery when he resigned in 1890.

In 1901, the Surgeon General of the United States army, George M. Sternberg, upon the recommendation of the executive council of the National Dental Association, invited him to re-enter the United

States army under contract to organize a dental corps. He served in the dental corps until he was retired with the rank of captain in 1911.

The University of Syracuse conferred the degree of doctor of science upon him in 1910 in recognition of his scientific work in oral surgery and his services to the United States army.

In 1914 he was elected as a fellow in the American College of Surgeons. He was the author of several books, published in both English and German: "Injuries and Surgical Diseases of the Face, Mouth and Jaws"; "A Text Book of Operative Dentistry," and a small manual, "Mouth Hygiene." He was the author of a number of scientific papers and had contributed many articles on dental research.

During the past five years, through the courtesy of Herbert M. Evans, professor of anatomy, he had been studying one or two research problems.

DEATHS

Hayes, James S. Died at Los Angeles, October 5, 1922, age 75. Graduate of Eclectic Medical College, Cincinnati. Licensed in California August 14, 1893. He was a member of the American Medical Association.

Bradshaw, Arthur F. Died at Bieber, California, September 3, 1922, age 52. Graduate of Jefferson Medical College, Pennsylvania. Licensed in California June 6, 1893. He was a member of the American Medical Association.

Willard, James P. Died at San Diego, October 2, 1922, age 78. Graduate of the Homeopathic Medical College of Missouri, St. Louis. Dr. Willard practiced in Denver, Colorado, for a number of years. He was a member of the American Medical Association.

Burque, Joseph George. Died at San Francisco, November 24, 1922, age 73. He was a graduate of Victoria University, Montreal, Canada, 1876. Licensed in California April 2, 1901. He was a member of the American Medical Association.

Clapp, Charles Ross. Died at Los Angeles, November 29, 1922, age 67. Graduate of the Chicago Homeopathic Medical College and Hospital, 1887. Licensed in California August 12, 1907. He was a member of the American Medical Association.

Keys, Ernest M. Died at Alameda, November 2, 1922, age 67. He was a graduate of the College of Physicians and Surgeons, Iowa, 1878. Licensed in California, November 6, 1889.

Pratt, Albert Harlow. Died at Merritt Hospital, Oakland, December 12, 1922, age 79. He was a graduate of Cooper Medical College, San Francisco, 1872, and the Bellevue Hospital Medical College, New York, 1878. Doctor Pratt was one of the oldest practicing physicians in Oakland and was a former member of the Board of Education. He came to Oakland in 1879 and was associated with Dr. W. K. Sanborn, 1307 Broadway. He was a member of the American Medical Association.

Scholl, Albert J. Died at Pacific Hospital, Los Angeles, December 9, 1922, age 62. He was a graduate of Rush Medical College, Chicago, 1880, taking a post-graduate course at the University of California, 1890, and since that time has been in active practice in Los Angeles until a few days before his death. He gave his services to the children of the Los Angeles Orphan Asylum and was actively engaged in other charitable work almost to the day of his death. Dr. Scholl was a member of the Los Angeles County Medical Society, State Medical Society, and the American Medical Association.

California State Journal of Medicine

OWNED AND PUBLISHED MONTHLY BY THE MEDICAL SOCIETY OF THE STATE OF CALIFORNIA
BALBOA BUILDING, SECOND AND MARKET STREETS, SAN FRANCISCO

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VOL. XXI

FEBRUARY, 1923

No. 2

ORIGINAL ARTICLES

RESPONSIBILITY FOR STATEMENTS AND CONCLUSIONS IN ORIGINAL ARTICLES

The author of an article appearing in the JOURNAL is entirely responsible for all statements and conclusions. These may or may not be in harmony with the views of the editorial staff. Furthermore, authors are largely responsible for the language and method of presenting their subjects. All manuscripts will be carefully read, but editorial privileges will be exercised only to a very limited extent. It is believed that the manner of presentation of any subject by any author determines to no small degree the value of his conclusions. Therefore, both the author and the reader, in our opinion, are entitled to have the subject as presented by the author as little disturbed as possible by the editors. However, the right to reduce or reject any article is always reserved.

HYPERTENSION *

By D. D. COMSTOCK, M. D., Los Angeles

The following statements are quite generally accepted as facts regarding high blood pressure:

1. Usually and probably always it is a compensatory process.
2. It is often found as a symptom of, or associated with, some well-known pathological condition.
3. Unquestionably, it often precedes arteriosclerosis and chronic nephritis, and in such cases operates as a cause rather than a symptom of these diseases.
4. It discloses a certain hereditary tendency.
5. It is found much more frequently among persons of a certain physical type—the so-called sthenic habitus.
6. It usually eventuates finally and often fatally in myocardial insufficiency, apoplexy or chronic nephritis with uremia.
7. The greater number of cases make their appearance during the fifth decade of life.
8. The changes incident to the climacteric undoubtedly play some part in many of the cases appearing among women at this period.
9. There is some relation between hypertension and diet.

All cases of hypertension may be included in two general groups: First, the symptomatic group in which the primary condition is known, and the

high blood pressure is understood to be a result or symptom. Second, the essential hypertension group in which there is no definitely known or discoverable cause.

We have made a somewhat careful study of more than one hundred cases of chronic hypertension. All of these patients were treated, as far as possible, according to the principles and plan discussed later in this paper. Many were under observation for months. With a number, a fairly complete laboratory, X-ray and clinical study was made, which enabled us to eliminate some of those that might be classed as the purely symptomatic, leaving still a large class presenting practically no physical or laboratory findings other than the hypertension. In most of these cases we have been able to reduce the pressure satisfactorily with definite relief of symptoms. Many of the symptomatic cases responded well to the same line of treatment.

My own observations as well as a study of the literature incline me to the theory that the cause of the hypertension in this second group is an unnamed factor which lies primarily in the tissues and that it is essentially a disease of metabolism; that the hypertension itself is a vital process designed to compensate for this dysmetabolism by raising the pressure in the capillary bed. There are several things about this condition that suggest a rather close relationship or similarity to gout—which is generally regarded as a metabolic disease. About gout we know many things, but as yet no one has found its ultimate explanation. And from the present outlook it would appear that we shall be kept in ignorance until the time when some scientific wizard shall be able to induce the ultimate cells of living tissue to reveal their intricate biochemical secrets. And this may be true also in regard to the nature of some possible dysmetabolism responsible for chronic hypertension.

The weight of evidence, I believe, is against the theory that toxins of intestinal origin or from focal infections are the cause of hypertension, although they are apparently often temporary exciting factors. Hypertension is too regular and constant in its setting and course, and is too exclusively present in a type of individuals who indeed are remarkably free from ordinary infections and from intestinal stasis to permit of these toxine factors being regarded as the chief cause. It is also too constantly absent in some other types who are markedly susceptible to ordinary infections and among whom also intestinal stasis is almost the rule, and who also may over-eat with impunity

* Read before the Section on Medicine of the Medical Society of California at Yosemite National Park, May 15, 1922.

as far as any danger from hypertension or chronic nephritis is concerned.

We have not found intestinal stasis a marked characteristic of these cases as we have observed the rapidity of their intestinal drainage with the X-ray following the ingestion of barium and paraffine pills. In fact, many of them show a more rapid elimination than the average person. I might mention that the method we follow in the study of intestinal stasis consists in giving on alternate days a half dozen or more various sized pills made of barium and paraffine and prepared so that at body temperature they are of the consistency of soft wax. We then make daily fluoroscopic observations and note the location of the barium in the intestinal tract. This method is chosen instead of simply mixing free barium with the food, because but little barium is required and we thus eliminate any possible chemical or mechanical influence on the bowels by the barium.

It is said of Lincoln that he kept on his desk a large, heavy envelope in which he placed miscellaneous odds and ends, and written across the front was the legend, "If you can't find it anywhere else look in here." Absorption of poisons from hidden infected areas is most certainly an important fact, yet it is possible that we are making too much of an etiological catch-all of the term, "focal infection" and that we consign to its convenient folds many questions worthy of a more careful and studied answer. At any rate I am fully persuaded that many hypertension cases have been deprived of some probably useless though quite harmless tonsils, but more unfortunately also some very useful teeth. Any surgery of the mouth or throat that will interfere with eating for a time may relieve hypertension regardless of infection. I recall very well a hypertension case under my observation a number of years ago. His teeth were indicted and convicted and all pulled. His pressure soon dropped to near normal and we were pleased. Furthermore it stayed low as long as the only diet possible was milk, fruit juice and soup. But on acquiring new teeth and a dexterity in using them (so that the patient could return to his former diet) the blood pressure returned to its former level. It was doubtless the restricted and alkalinizing diet that deserved the credit for the temporary reduction in pressure rather than the elimination of any focal infection.

Principles of Treatment—Assuming that hypertension is a malmetabolic condition, naturally one would conclude that its treatment should concern itself chiefly with those things which are more especially involved in metabolic processes, namely: muscular activity and rest, alimentation and the endocrine functions.

Exercise and Rest—It is a significant thing that high blood pressure is seldom found among field laborers and others who perform work regularly requiring vigorous muscular effort. Muscular activity is the natural stimulus to normal metabolic processes and the decree saying that "in the sweat of thy face shalt thou eat bread," may well be regarded as a law of life, and the man who eats bread and then does his sweating in a Turkish

bath is not fulfilling its conditions. Exercises that are general, moderate and free, with proper periods of rest are certainly beneficial in hypertension, but of course, these must be prescribed with due regard to the overtaxed myocardium. Moderate muscle strain is good but nerve strain is not good. Rest of mind is more important than rest of body. Therefore, the hyperpietic should plan so as to live a life of physical activity but of mental tranquillity.

Alimentation—No line of treatment have we found to yield such satisfactory and uniform results as that dealing with alimentation. In a large number of patients it was the only treatment and was carried out with the patient at his regular duties. In their dietetic management we have for a number of years been governed by the following principles:

1. The patient's caloric intake is determined by his ability properly to metabolize it.
2. The protein is not too greatly decreased.
3. The diet includes an abundance of the so-called protective foods.

Caloric Intake—If metabolism is faulty or difficult, care taken to introduce into the system only that amount of food actually needed to maintain the body, and for a short time even a slightly less amount can surely be only a reasonable procedure. We weigh our patients carefully and reduce their calories until they lose, say a pound or more in weight. As these patients are usually stout there is a distinct advantage in reducing their avoirdupois. It is surprising to what a low point the diet must be reduced before some of these patients will begin to lose—1200 or even 1000 calories in some cases. If they are not overweight we permit only the slight reduction necessary for us to find their maintenance diet. In choosing fats preference is given to cream, olives and walnuts. Carbohydrates may be chosen from most any source, those of fruits and vegetables being the best. Many of these patients are great bread eaters, and a decided reduction in the amount eaten even to the point of eliminating it entirely for a time has been found an advantage.

Protein Reduction—It is safe to suppose that if there is to be a decrease in the total amount of food, the decrease better be in the purely oxidizable foods, fats, starches and sugars of which the body usually has a stock in reserve, and not in protein, the tissue building food, a reserve supply of which the body never carries. Not only does protein enter into the formation of tissue, but it also is essential to the normal metabolism of starch and fats. It must therefore enter regularly and sufficiently into the daily ration. Protein eaten yesterday does not suffice for today, as the body has no way of storing this food element. I believe that the excessively low protein diet for these patients is a mistake. Our experience practically confirms me in the belief that the more liberal allowance of protein is not only permissible but desirable. I have not seen a patient whose pressure was reduced by simply cutting down on the allowance of protein. With many of our patients we have actually increased it beyond what they had pre-

viously been taking. That no unnecessary burden be added in the way of excessive protein waste preference is given to the foods yielding the complete proteins as milk, eggs, and leafy vegetables. In every case whether by cutting down the energy food or increasing the protein we increase the ratio of protein to energy food.

Protective Foods—It is very essential that the diet of these individuals contain an abundance of the so-called protective foods, chiefly fruits and vegetables, to insure an abundance of alkaline and other mineral salts as well as vitamins. If the assumption that hypertension is a metabolic disease is true, this is important because of the part these play in normal metabolic processes. The giving of chemically pure and artificial preparations of these salts we have not found satisfactory. In order to get satisfactory results instruction must be specific and adapted to the needs and conveniences of each patient. We usually make out a daily program to be followed strictly until modified. This is changed every week for variety if for no other reason. The patient is kept on this strict regimen until he becomes intelligent as to his particular dietetic limitations and his optimum diet.

There is a distinct advantage in knowing what the diet has been before the special program is begun. I ask for a daily detailed list of all foods eaten during two or three sample days, and am always optimistic as to the dietetic possibilities in a patient whose diet has been something after this order: Breakfast—coffee, buttered toast, bacon, eggs; Lunch—bread and butter, tea, cookies, and the usual dinner with its preponderance of rich gravies, salad dressings, bread and butter and desserts, and its dearth of protective foods, (milk and leafy vegetables). For in the great majority of these cases a diet restricted in carbohydrate and fat, relatively high in protein and liberal in alkalizing fruits and vegetables will bring most satisfactory results. The following brief case report may be taken as an example of the usual detailed dietetic plan we have followed. Of course, it should be said that the program is made to fit each individual case and no two patients are treated exactly alike.

CASE REPORT

Mrs. C., age 60, well-to-do housewife, came January 25, complaining of repeated attacks of partial paralysis and peculiar sensations in her right leg. Also dizziness and shortness of breath. Her previous history revealed nothing particularly remarkable. Sedentary habits for years, never constipated, digestion always good. Ctma quite normal. Examination revealed an over-stout woman or the normal habitus—five feet tall and weighing 176 pounds. Lungs negative, heart slightly enlarged, first sound diminished in duration and intensity, A₂ accentuated. No murmurs. Abdomen fat and pendulous. Reflexes active especially on right side. Blood pressure 210-120. Urine negative except for an occasional hyaline cast. Blood examination, including chemistry, showed no deviation from the normal worth mentioning. Basal metabolism was minus 15. Her customary diet was: Breakfast—mush and cream, buttered toast, coffee with cream and sugar; luncheon, bread and butter, stewed fruit, doughnuts or cookies, tea; dinner, meat, potatoes and gravy, bread and butter, vegetables, pie or cake aggre-

gating about 2000 calories in all, with 150 to 200 calories of it protein.

The following diet list was given January 26: Breakfast—one glass orange juice, two eggs, one slice toast (no butter). 10 a. m., one cup hot vegetable broth. Dinner (at noon)—baked potato, butter, ordinary serving, raw vegetables—freely, cooked leafy vegetable (liberal but prepared without fat), choice of any one of: (1) cottage cheese—two tablespoonfuls, (2) one or two glasses skimmed milk or buttermilk, (3) small serving (2 ozs.) lean meat. 4 p. m., vegetable broth. Supper—Grapefruit (½) with honey, skimmed milk (one glass).

This ration totals 1100 to 1200 calories and 200 to 250 calories of it are protein. In this way the proportion of protein to energy food was greatly increased. This we believe to be a very important point. No other treatment was given this patient except a half grain of desiccated thyroids, three times a day. How much this influenced the case I don't know as other similar patients seemed to do just as well without it. At the end of a week she felt much better, her blood pressure was 190-110 and she had lost 2½ pounds. She was quite pleased with herself and the diet, so no change was made. She continued to lose two or three pounds weekly until her weight became 150, and her blood pressure was 152 systolic and 95 diastolic. Her diet was increased to a maintenance level with her weight at 150 pounds and her pressure remains below 150 systolic and 100 diastolic at all times. Her symptoms have disappeared and she feels better and stronger every way.

Simple starvation without an intelligent regard to the dietetic principles involved may be dangerous because of the development of a condition of acidosis and other untoward complications. I recall very well a patient whom I first saw several years ago. For six weeks she had been on a diet for high blood pressure. On inquiry I found that she had been getting between six and eight hundred calories daily derived from a diet the main part of which was toast and prunes. She had a severe headache, was nervous, restless and felt utterly exhausted, and her blood pressure was still 270 as it had been previously. Practically the only change made in her program was to change her diet. In this we took away her prunes and toast and gave her a variety of nitrogenous foods, yielding approximately 250 calories of protein. Besides this, she was given enough of the alkalizing foods to bring her total calories to 1200 daily, and she not only began to feel better immediately, but within a few days her pressure had dropped to 170. Her calories were increased to the maintenance level of about 1500, as I remember, and with slight variations her blood pressure continued between 160 and 170 for the several years following that she was under my observation. Experience has taught us that with some of these patients who have had an excessively high pressure for a considerable length of time it is not wise to try to force their pressure too low, as they seem to do better with it at a moderately high level.

Other therapeutic measures employed among many of these patients were short tonic hydrotherapeutic procedures and general petrissage for the purpose of stimulating metabolism. Corpus luteum was given to women at the menopause and proved unquestionably to be of benefit. Thyroid

was given to many, simply on theory of low basal metabolism, but we failed to see much marked results as followed the use of corpus luteum in certain cases. With a few of the cases we have used some of the various electrical modalities and I would pronounce them good but not good for much. The nitrates we hardly used at all.

In the great majority of patients who had not already shown evidence of a serious kidney or myocardial lesion, the pressure was markedly reduced, and the general condition improved. And patients observed months afterward who had kept reasonably close to the prescribed diet still presented a satisfactory blood pressure.

In the absence of complications, all over-stout patients, and women at the climacteric responded the most readily and satisfactorily to treatment. The thin arteriosclerotics and those red skinny men whose very appearance suggested a small red kidney were the most difficult to treat and responded the least satisfactorily.

Yaws Reported in California—A letter from Harry E. Alderson of the faculty of Stanford Medical School reports a case of yaws. If there is one case in California there probably are others, and if this disease—new to this State—is to be properly studied and promptly eradicated, it would be advisable for physicians everywhere to make notations of all possible cases of yaws. The Journal would appreciate a report to this office regarding the prevalence of this disease in any part of this State. If possible, the report should show where the disease was contracted, the nationality of patient, character of lesions, if a Wassermann test was made, if examinations were made for spirochetes, how the diagnosis was established, what was the treatment and the results of the treatment.

In an editorial discussion of yaws in the United States, the Journal of the American Medical Association (December 22, 1922), says in part:

"The fact that, in a country as near to the United States as is Santo Domingo, a disease may be sufficiently prevalent to permit observers to report a study of more than a thousand cases, with an incidence of from one hundred to three hundred each day, whereas the discovery of a single case of the same malady in this country excites evident interest among scientific clinicians because of its rarity, furnishes food for reflection. Despite its great prevalence in certain parts of the West Indies, American dermatologists seem to be agreed that yaws is rare in the United States. This conclusion is justified by the recent review of Fox, in consultation with many American colleagues, of recorded instances in the literature. Yaws often simulates syphilis, both clinically and pathologically. The etiologic micro-organisms can be distinguished only by skilful technic in the hands of trained workers. Yaws, however, is a much less serious disease, as it does not attack the central nervous system or viscera and is not transmitted by heredity. Furthermore, it is much more easily eradicated by arsphenamin than is syphilis. It might be supposed that, because of the resemblances between syphilis and yaws, the latter has often escaped recognition as such and has been falsely diagnosed. This seems unlikely to Fox, in view of the large number of well trained dermatologists scattered over different sections of the United States. He ventures the belief, therefore, that yaws would probably not thrive in the northern part of this country, as it is strictly a tropical disease. The majority of the cases reported in northern seaports have evidently been imported from foreign countries. Why climate should be the decisive factor is not easy to conjecture.

ASSOCIATED SYPHILIS AND TUBERCULOSIS*

MORE PARTICULARLY AS THEY AFFECT THE LUNGS

By A. L. BRAMKAMP, M. D.

The literature upon this subject is considerable in amount and covers a long period of time. Increasing knowledge and the newer methods of diagnosis and treatment, however, have thrown new light on these diseases and on their association and, therefore, make timely and useful renewed consideration of this always important field of medicine.

How commonly do syphilis and tuberculosis occur together in the same subject? It will be advisable first to consider the incidence of each disease alone. As to the prevalence of syphilis, statistics vary widely with the source. In seven hundred autopsies performed by Thompson for the coroner of St. Louis, two-thirds of all adult cases showed gross lesions of syphilis. This material is representative of the underworld. Warthin (quoted by Thompson) in routine autopsies at Ann Arbor found syphilis present in one-third of all adult cases, the material being drawn from rather well-to-do people, largely of rural communities. However, Pusey, after consideration of much data from numerous sources, concludes that in the United States, at a very conservative estimate, syphilis affects more than 5 per cent of adult males and more than 1 per cent of females, or more than 3 per cent of the entire adult population. As Warthin's 33.1-3 per cent, or one in three, is certainly too high, so Pusey's 3 per cent is probably low, particularly if congenital syphilis is included. We may believe, then, that there are between three and five million syphilitics in the United States.

With regard to the tubercle bacillus, infection, it is agreed, is practically universal by the time early adult life is reached.

If syphilis really plays a part in converting tuberculosis infection into active tuberculosis disease, every syphilitic would be potentially consumptive, using that term in a broad, loose sense.

While tuberculosis infection is so general, it is estimated that, as a matter of fact, less than 10 per cent ever become subjects of recognizable clinical tuberculosis. Still, one in every eight deaths is attributed to tuberculosis and some, no doubt, escape record.

Attention is called to the great prevalence of these two diseases to emphasize the fact that their co-existence in the same individual must be very frequent.

For the purpose of our particular inquiry, associated syphilis and tuberculosis of the lung, it is necessary to consider the frequency with which syphilis alone affects that organ.

Syphilis of the lung has been considered a rare disease, as the following variously quoted data show:

Osler reports twelve cases in 2500 autopsies.

* Read before the fifty-first annual convention of the Medical Society of the State of California, Yosemite Valley, May, 1922.

Fowler found only twelve specimens in all the London museums.

At Copenhagen, out of 6000 cases of syphilis only two cases of syphilis of the lung were observed clinically; but it is noteworthy that out of eighteen cases of acquired syphilis that came to autopsy, three had gummatous lesions of the lungs, and gumma of the lung is more rare even than sclerosis.

Chiari, in the extensive material afforded at Prague, found only two cases of syphilis lesion of the trachea and one of the lung.

Peterson, in eighty-eight autopsies of patients with acquired syphilis, found lung lesions in eleven.

At the Massachusetts General Hospital one case of syphilitic pneumonia with cavity formation was found.

Out of 4880 autopsies which showed lesions of syphilis, Symmers found the lungs involved in twelve.

Thompson found three cases of typically syphilitic lung lesion in 470 syphilitic subjects.

Combined, there are here recorded autopsies on 5456 syphilitics, with syphilitic lesions of the lungs in twenty-nine, or one in 198. There is real reason, however, to question whether these figures represent the facts; first, because the usual lesion of syphilis of the lung, sclerosis, possesses nothing characteristic, but resembles sclerosis from other causes; in particular, that of tuberculosis and cases are, therefore, not recognized; and second, because there is probability that the lung may be the seat of such infestation by the spirochete and of such microscopic pathology as Warthin has found in the heart, the spleen and the pancreas. If such work has been done with the lung, it has escaped my notice.

Vedder quotes Brook as follows: "In South Africa when tuberculosis was unknown and syphilis was prevalent, 35 per cent of all natives had fibroid conditions of the lungs."

Clinically, also, the diagnosis of pulmonary syphilis is beset with like difficulties, there being no symptoms or physical signs that are pathognomic of the disease. The diagnosis must be largely by exclusion and without doubt many cases are unrecognized, most of them being called tuberculosis.

To establish a clinical diagnosis of syphilis of the lung, the sputum must be negative to repeated, properly made tests for the tubercle bacillus or other organisms that may produce lesions of a similar nature; other evidences of syphilis must be present as bone lesions, keratitis and, particularly, because so common, syphilitic orchitis that causes an atrophy and a hardening of the testicle; the Wassermann test must be positive. It is claimed by some (as Fishberg) that tuberculosis may sometimes cause a positive Wassermann, so that the test must be plainly positive and persistent. Moreover, the positive Wassermann does exclude other disease.

The therapeutic test gives most help in diagnosis of lung syphilis, for the beneficial results of anti-syphilitic treatment of this lesion, properly given, are so usual, so prompt and so marked as to

leave no question. Fishberg well says: "The efficiency of the therapeutic test does not imply that, in the least suspicious case, a diagnosis of syphilis of the lung should be made and treatment applied."

The following abbreviated case record illustrates some of the difficulties of diagnosis:

Patient B, railroad clerk, 56 years of age, but old looking, referred to Banning Sanatorium because of severe repeated pulmonary hemorrhages, supposed to be tuberculosis. Had extensive consolidation of right lung, slight fever, cough. However, general condition was good and sputum scant; no tubercle bacilli found; Wassermann three plus. X-ray showed dense clouding of whole right side, permitting no differentiation in lung or outlining of vessels. Diagnosis of aneurysm of aorta was made, confirmed by autopsy; the clouding in the X-ray being due to hemorrhage into the lung.

In this connection the experience of Wright at the Government Sanatorium for the Tuberculous at Fort Bayard, New Mexico, is very suggestive. He used succinimide of mercury, increasing the dose gradually until the limits of toleration were reached. He reported an extraordinary proportion of recoveries, and on the basis of this experience recommended mercury as an effective remedy for tuberculosis. The method was extensively tested and proved disappointing, failing not only to do good, but often actually doing harm. Wright was evidently treating syphilis of the lung, alone or most often in combination with tuberculosis, in a material especially rich in this association. This work was done before the employment of the Wassermann test and this means of control was therefore lacking.

A clinical case of the associated diseases, showing a common picture, is the following:

R. S., 54, salesman, with symptoms and signs warranting diagnosis of tuberculosis of right upper lobe; also extensive tuberculous ulceration of larynx, tubercle bacilli in sputum rather numerous, Wassermann 4 plus, no manifestations of syphilis. Laryngeal lesions healed completely under tuberculin and local treatments. Later developed superficial tuberculous ulceration of the pharynx and did badly. Fearing that syphilis might, after all, be exerting an occult harmful influence, mercury was cautiously administered but with no benefit, and patient died of tuberculosis.

A helpful sidelight on the frequency of the two diseases in association is afforded by the figures on the occurrence of a positive Wassermann reaction in cases definitely tuberculous, but here, too, there is disconcerting variation, ranging from 5 per cent to 70 per cent, and an individual's own figures may show wide differences from year to year. Thus von Adelung's material in 1914 gave 23.5 per cent; in 1915, 7.6 per cent; in 1916, 3.2 per cent; in 1917, 6.2 per cent, an average of 8.7 per cent in 195 cases. Shortle found the Wassermann test positive in 10 per cent of a series of his cases of pulmonary tuberculosis. In 6324 cases from various sources the coincidence of the two diseases as shown by the positive Wassermann averaged 17.81 per cent.

In view of such data as has been presented, there is good reason to believe, with Landis and Norris, Carter and numerous other authors, that gross syphilis disease of the lung is not so rare as has

been thought and, if the spirochete behaves toward the lung as it does toward other tissues, its association with the tubercle bacillus in the lung must be relatively common.

Syphilis as a cause of lowered local resistance in the lung is a possible but probably unusual factor in the development of tuberculosis.

"As to the effect of the association, it would be quite natural to suppose that this would be disastrous, but, strangely enough, opinions on this point seem conflicting. There are some who believe that syphilis exerts a retarding and in some cases even a curative influence over the tuberculosis, while others hold that tuberculosis is distinctly aggravated by its association with lues. Cases sustaining both contentions are to be found in the literature."

Fishberg says: "Syphilis, while not antagonistic to the development of phthisis, yet influences the latter so that it runs a mild course showing strong tendencies to fibrosis," having reference here to syphilis in its later stages.

Carter, on the contrary, finds: "The bulk of opinion is that coexistence of the two infections renders prognosis more grave." Landis and Norris believe that the course of the tuberculosis does not differ from that occurring in non-syphilitic individuals.

The explanation of the difference of opinion seems to lie here, that there are varying factors in different cases, the effect of syphilis upon tuberculosis being dependent largely on the stage and degree of activity of each disease and the condition of general health or "the resistance" of the individual at the time.

Our own opinion is that syphilis, on the whole, plays a minor role in the joined infection. We have not observed, as a rule, any effect of old syphilis, good or bad, on the course of pulmonary tuberculosis. While it is not uncommon for tuberculous subjects to have a positive Wassermann test, such cases run the usual course uninfluenced, unless the lues takes on an active form and becomes, as it does occasionally, a direct factor in the local pathology or affects the general health.

Occasionally an individual with early tuberculosis, whose condition is still good, for some unexplained reason will continue to do well or even better after acquiring syphilis. Quite generally, however, when the two diseases occur in the same individual in acute form, early syphilis and active tuberculosis, the course of both is likely to be aggravated and the outcome to be disastrous.

We have now to consider the question of treatment of the conjoined diseases.

That the older methods of treatment of syphilis with mercury and iodides, injudiciously applied, are capable of doing serious harm in the presence of coexisting tuberculosis was and is generally recognized. The fact was made especially clear when Wright's method was being tried out following its promulgation in 1908. The need of extreme caution in the use of mercury was emphasized and the same is to be said of the iodides, the field of usefulness of the latter being still more

limited as to pulmonary syphilis alone or combined with tuberculosis.

The advent of salvarsan was therefore received with high hope by those having to treat associated syphilis and tuberculosis; its use was instituted with enthusiasm and many glowing reports have been recorded. It was considered a safe and adequate substitute for mercury.

However, time enough has elapsed and experience has accumulated to compel a revision of these early optimistic conclusions.

Time and again Cabot, in the Massachusetts General reports, has called attention to the damage salvarsan may cause, particularly in the liver, and Richardson, the pathologist in the same institution, lately calls salvarsan "a two-edged sword." From other quarters also have come numerous and emphatic notes of warning.

Of the effects of salvarsan as an activator of latent, quiescent or arrested tuberculosis and as a stimulant to increased activity in developed pulmonary tuberculosis, the following data are illustrative: Elliott—Three cases of uncomplicated syphilis of the lung responded beautifully to treatment; in seven cases of arrested tuberculosis the disease was caused to light up again; in one case of quiescent tuberculosis of the knee joint, the disease was so aggravated as to compel amputation; in one case of lupus there was a marked local reaction; the final result was not stated.

Herxheimer and Altman report four cases of surgical or pulmonary tuberculosis in which aggravation of the process occurred under salvarsan. Vivian expresses his opinion as follows: "To continue to administer arsphenamine to a patient with tuberculosis is frequently criminal. The size of the dose, the interval of administration, do not materially alter the result; neither does the stage of the tuberculosis nor the extent of the disease. This conclusion has been reached after having seen literally dozens of such cases die of a rapid tuberculosis following the administration of arsphenamine. . . . Arsphenamine, in some undetermined manner, produces a decidedly deleterious effect upon the lung of a syphilitic who has tuberculosis and will cause his death if continued." This view seems perhaps extreme, but it puts emphasis where emphasis is needed.

A case in point that came under our own observation and a type of others is the following:

H., aged 40, tuberculosis of larynx and lungs; Wasserman 4 plus, had sanatorium treatment for about a year and left in excellent condition with disease arrested. Went to Colorado, where he continued the cure and remaining well for four months and until he was given salvarsan to eradicate syphilis when he promptly relapsed and, on his return, nine months after leaving Banning, he had extensive active tuberculosis of larynx, both lungs, and anus, continued to grow worse and died.

It is agreed that the most effective treatment of syphilis now available is the combined treatment with mercury and salvarsan; that each has particular advantages and some special indications, but that neither alone is adequate.

The tuberculous individual with syphilis cannot be treated most satisfactorily by the use of one of

these remedies alone if the object aimed at is the elimination of the spirochete and the attainment of a negative Wassermann. However, the end to be sought in these complicated cases is not a cure of the syphilis. Not every tuberculous patient with a positive Wassermann or even with some clinical evidences of syphilis should be mildly or vigorously treated for syphilis. The tuberculous phase is the one to receive first consideration. Anti-syphilitic treatment is indicated only when syphilis seems to be the predominating factor or when it is exercising a sufficiently harmful influence as to render less favorable the course of the tuberculosis.

In any case the remedy or remedies employed should be selected to fit the conditions existing, applied in such dosage and at such intervals and for such periods of time as are found to produce an abeyance of the syphilitic factor, with care at the same time to avoid aggravating the tuberculosis. In this way, usually very satisfactory results will be secured.

The more active and the more advanced the tuberculous process, the greater is the caution necessary to be observed in pushing anti-syphilitic treatment, but it is not to be forgotten that latent, arrested and quiescent tuberculosis may be fired up by injudicious treatment, with mercury, arsphenamine or both, and that such untoward effect may not become apparent at once, but its appearance may be delayed for weeks or months.

CONCLUSION

Syphilis of the lung is less rare than has been thought.

Syphilis and tuberculosis are also more often associated in chronic fibroid lesions of the lung than is generally recognized.

The effect of the association of syphilis with tuberculosis in the lung varies, depending largely on the stage and the degree of activity of each.

Anti-syphilitic treatment is indicated only when there is reason to believe, first, that syphilis is directly affecting the general health of the patient or is producing dangerous local lesions; or second, when the two processes are associated in the lung and the usual methods of treatment for tuberculosis fail to bring about satisfactory improvement.

Treatment of associated syphilis and tuberculosis must be individualized and carried out with due caution as to remedy selected, dose, interval and duration of treatment. Mercury, arsphenamine and iodides are all capable of great good as well as of great harm, immediate or late. Mercury is probably less dangerous than the arsenical.

California Schools and Optometry—The Optical Journal and Review of Optometry of December 14, 1922, in a leading editorial discusses the relation of optometry to the schools and in part says:

Optometry has taken another step forward, by securing official recognition in public schools. The California law authorizes local boards of education to engage optometry inspectors on the same basis as physicians and dentists have been commonly employed. A start has been made in Los Angeles, where two optometrists are now employed to look after the refraction of the eyes of the children in the schools. . . .

A CASE OF BILATERAL MALIGNANCY OF THE TESTES *

By CHESTER O. TANNER, M. D., San Diego, Cal.

I recently reported a series of one hundred cases of tumor of the testicle, all of which were unilateral. From a study of this series and from the literature, the conclusion seems warranted that bilateral malignancy of the testicle is extremely rare. Such a case has recently been seen, and on account of its rarity is reported.

CASE REPORT

C. D. B., age 45 years, was first seen by J. P. Lewis, April 12, 1922. Six months previously the patient had noticed a slight swelling in his right testicle, accompanied by some pain. He was not certain of any trauma to the part. The swelling gradually increased in size for three months, at which time a small lump was noticed in the left testicle. Both testicles now enlarged very rapidly in size. Six weeks later the skin over a portion of the right scrotum became red and inflamed. Two weeks after that a large area of skin surface became gangrenous. At this time—about four weeks prior to admission to the hospital—the patient became very septic, began to lose weight rapidly, and was delirious at times.

On admission he was very septic and extremely emaciated. The temperature was 102 and the pulse 140. The chest showed evidence of old fractured ribs. The abdomen was negative. There were no tenderness or masses in the abdomen or inguinal regions. The pupils were normal and the reflexes were active. The Wassermann reaction was negative. In the right scrotum, which was gangrenous over an area 10 cm. in diameter, was a large oval-shaped mass 15 x 10 cm. in size. The scrotal skin was tightly adherent to the mass. The vas could be palpated at the back. The left scrotum contained a mass 12 x 8 cm. in size. The skin on this side was everywhere freely movable over the mass. The upper portion was fluctuant and translucent, and extended up to the external ring. The vas and epididymis could be made out. The seminal vesicles were negative.

Operation. April 12, 1922—Double orchidectomy with removal of almost the entire scrotum. The more radical operation could not have been done on account of the patient's condition. The gross specimens were large oval-shaped, very firm, encapsulated tumors of the testes, the right 15 x 10 cm. in size and weighing 1100 grams, and the left 12 x 8 cm. in size and weighing 700 grams, with an accompanying hydrocele on the left side. The epididymis could be made out on the left side. Cut surfaces showed soft homogeneous pink-colored tissue with numerous whitish-colored areas of necrosis. No testicular tissue was made out.

Microscopic sections show solid masses of polyhedral and rounded cells of varying sizes, containing relatively large nuclei and one or more prominent nucleoli. Numerous mitoses are present.

Diagnosis—Carcinomatous type of teratoma testis.

Subsequent History—May 1, 1922, retroperitoneal masses palpated on right side. June 1, 1922, retroperitoneal masses growing rapidly. July 1, 1922, patient in comatose condition with numerous metastases. July 8, 1922, died.

Chevassu says that true neoplasm of the testis never spreads to the other testis. In 1915 Coley reported a case of bilateral abdominal malignant testes removed at operation, by John Wyeth in 1905. In that same year O. C. Smith reported a case of bilateral malignancy in undescended testes. Only recently has a case of simultaneous

* Presented at staff meeting of St. Joseph's Hospital, San Diego.



Fig. 1
Cut surface of right testicular tumor showing its enormous size and the absence of normal testicular tissue

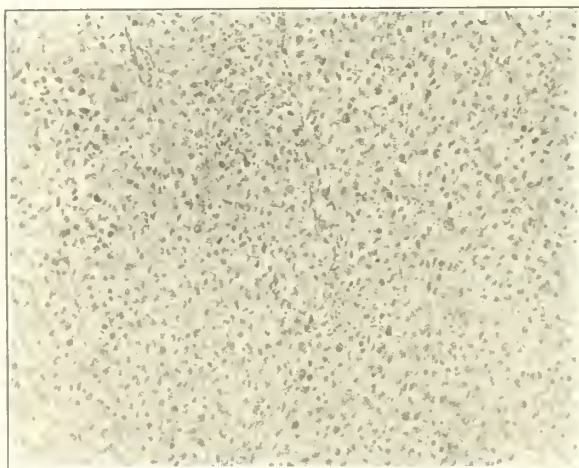


Fig. 2
High power microphotograph showing the typical large, polyhedral cells with large dense nuclei, containing numerous mitoses, and a clear, almost colorless cytoplasm

cancer of both testicles been described by Oraison. His case was that of a man fifty years of age, who, early in 1918, suffered a testicular traumatism. Some months later, when he had apparently recovered, he made a journey of 15 kilometers on foot. Immediately afterward, his right testicle became swollen, but not painful. This swelling increased, and in a short time similar changes took place in the left testicle. The patient was treated locally for two months, at the end of which time operation was decided upon, but diagnosis was reserved. In the region of the left testicle the vaginalis was filled with fluid and a neoplasm was found, involving the testicle and cord. A similar condition was found on the right side. The tumor on the left side was removed, but the growth on the right was left intact, owing

to the patient's condition. Microscopic examination of the tumor showed it to be an epithelioma, having its origin in the seminal vesicles. The points of interest in the case are the bilateral position and its relation to trauma. In the case reported in this paper no point other than the testes themselves could be determined as the origin.

GLIOMA OF THE RETINA

Case Report by HUNTER L. GREGORY, M. D.,
Stockton, Calif.

The patient whose history is here given is a boy, age four. The child was brought into my office by his mother on April 6, 1922, with a request that I examine his eyes.

On questioning the mother I was told that the first evidence of any ocular manifestation was in December of the preceding year, at which time there was noticed a diminution in the vision of the left eye.

When I first noticed the patient I observed a bright, whitish reflex emanating from the pupil, and on examination there was noted a marked increase in tension, the pupil was dilated, cornea and anterior chamber clear, lids and conjunctiva normal. Fingers could be seen to the temporal side.

The pupil was dilated, and on ophthalmoscopic examination I was able to observe a mass situated behind the lens and covered with newly formed blood vessels.

In making a diagnosis in these cases we must consider pseudo-glioma, in which case there will be a history of acute febrile disease followed by inflammation of the eyeball and also a previous inflammation of the iris. In this case there was no such history given and I felt justifiable in making a diagnosis of glioma.

Immediate enucleation was advised and I could see that the mother was prone to seek other advice. I did not see this patient again until the latter part of November, at which time the eye had become transformed into a large, ulcerated, painful and bleeding mass, filling the entire orbit and projecting out between the lids.

Christian Science treatment was then discontinued and the eye enucleated. Since that time I have been unable to obtain additional history.

PSYCHOTIC SEQUELAE OF EPIDEMIC ENCEPHALITIS *

By ROBERT LEWIS RICHARDS, San Francisco

In the study of epidemic encephalitis our attention during the epidemic period of 1919 and 1920 was too much centered on the lesions of the mid-brain and the reactivations of the process. Many mild cases were overlooked or wrongly diagnosed only to manifest more marked cortical disturbances later and lead to a more correct diagnosis. Among the large number of patients in out clinics, this mistake in diagnosis has frequently been discovered. Thus, at Bellevue Hospital low psychometric results in successive tests of the same individuals were found to depend upon an intervening attack of epidemic encephalitis (Mental Hygiene, Janu-

* Read before the Section on Neuropsychiatry of the California Medical Society, May 17, 1922.

ary, 1922). There can be no mistake about the cortical involvement in such cases. I have also repeatedly proved that the toxic changes of chronic drug poisoning and alcoholism produce a low psychometric rating if the testing is done within thirty days after admission to the hospital. Later psychometric ratings have shown the real mental level for the individual.

Other psychotic manifestations in cases of relatively recent epidemic encephalitis have led me to review the early psychotic manifestations, select the more persistent diagnostic indications and collect a series of 16 previously undiagnosed cases with different psychotic manifestations that have come under my personal observation and study during the past year. The accounts of early psychotic symptoms in epidemic encephalitis are plentiful in recent literature. Kirby describes very clearly the delirium with its various dips, the stupor with preserved personality, the presence of a sleeplessness as well as excessive drowsiness, the catatonic type and the Korsokow type of syndromes—all in the acute stage. He states also that when examined later all the eighteen cases showed distinct mental abnormalities chiefly in the emotional sphere.

Jones and Raphael described more in detail the early psychotic manifestations in four well-studied cases as follows:

An initial irritative stage resembling the usual somato-psychoses, e. g., euphoria, hypomania, hallucinations, hysterical symptoms, and occasionally paranoid ideas, and confabulation.

Later a stuporous stage with marked emotional defect. Cataleptic states and mask-like facial expressions were also noted at times.

Personality was remarkably well retained and, being only blurred by this stupor, modified the manifestations.

Amnesia for the irritative stage was common. Mental residuals were seen in all cases.

Archambeault and I. Abramson, Cruchet, Sainton, Tilney and Howe, Burr, C. K. Russell, and L. B. Holman all describe similarly the striking emotional stupor; all theorize as to the localization of lesions in the thalamus, or pons, or elsewhere; and all agree as to the involvement of the cortex.

There are many mystifying features as to points of particular involvement in this disease and also in anterior polio-myelitis, where the spinal cord and the seventh cranial nerve special involvements may be compared with the mid-brain and third cranial nerve involvements in epidemic encephalitis. But it is more important to know all the possible involvements and thus the possible range of clinical symptoms.

Remissions and reactivations are common in epidemic encephalitis and in all proteosomal diseases—neurosyphilis, hydrophobia, trypanosomiasis, spirilliosis, for example. It seems logical and necessary, however, to think of a continued disease process.

We are obliged to depend upon clinical manifestations, since in both epidemic encephalitis and polio-myelitis, laboratory studies do not explain the

localization or remission or give us any positive diagnostic aids.

Clinically, epidemic encephalitis was first recognized and described because of its psychotic manifestations and called "sleeping sickness," although it might as well have been called in some cases "sleepless sickness." From a study of all the psychotic symptoms, we have a distinctive clinical picture of the early stage as described above, and we find in our list a varied assortment of late psychotic manifestations.

It is interesting also that we have here the usual requirements for the development of a psychoneurosis, viz: a period of imbalance with stress and exhaustion and hypersuggestibility, such as we find in war neuroses, but in not the same degree, or showing such simple clear-cut clinical pictures. As to the pathological basis of this and other psychotic sequelae of epidemic encephalitis, there are unlimited possibilities but no proven facts. We also know that the whole physical system is below par, and that unusual bodily sensations must be produced in a person whose resistance is lowered, whose critique has been in abeyance, and in whom the continuity of personality has been disrupted.

In general also, from the physical side, we have in epidemic encephalitis a disease process, varying greatly in severity of onset, and recurring at irregular, unsuspected intervals, and in different forms. We might speak of three general characteristics of this disease, viz:

1. Remarkable variation in the intensity and manner of the initial attack often leading to mistake in diagnosis.

2. Recurrences of varying degree and localization, which are mentally very disturbing to the patient.

3. A chronic type of disease which is always a difficult fact for personal adaptation.

In establishing psychotic manifestations as sequelae of epidemic encephalitis we have in general some distinctive features which are diagnostic aids.

- I. In following the history back, we find an initial period with amnesia and a delirious type of symptoms which strongly suggest the "initiative stage" of epidemic encephalitis.

- II. Prior or concurrent so-called "influenzal" cases is a suggestive clinical fact.

- III. Third nerve involvement during an attack and recurrently present in the subsequent history of this case. At the time of examination this may be only a mild convergent weakness, but inquiry will reveal prior evident double vision. At times, too, such an adaptation is secured that the patient will not mention a near double vision.

Waidenbaugh describes the general eye symptoms as follows most completely:

1. Ptosis—frequent, fugacious, and usually associated with

2. Diplopia, which varies greatly in degree.

3. Disturbance of visual acuity by retrobulbar neuritis, in an inconstant capricious fashion. Central and ring scotomata may be seen. These scotomata resemble what one has seen in multiple sclerosis, syphilis, glaucoma and retrobulbar neu-

ritis. It would seem, however, that the inconstancy and the symptoms complex would prevent mistakes.

4. Accommodation paresis which is seen also in syphilis, botulism and diphtheria.

5. Convergent paresis—most frequent and fugacious.

6. Anisocoria noted in 20 per cent of the cases.

7. Nystagmus—also frequent in acute stages.

As to the order of frequency of eye signs, Gustavus Hague states the following:

1, Diplopia; 2, ptosis; 3, impaired accommodation; 4, optic neuritis.

Inquiry among San Francisco ophthalmologists indicates that convergent weakness is more frequently and characteristically noted. In my series of sixteen cases convergent weakness was noted at examination in thirteen cases.

IV. Sleep disturbances. Sleeplessness is especially noted in the psychotic sequelae. In these sixteen cases were found nine cases with lessened or no sleep, one with too much sleep and six with no discovered disturbance. German reports show a series of twenty-two cases with similar histories, with no sleep at night and some sleep in the day time.

V. Resistance to the usual methods of treatment in that more time and effort are required. Hence it is well to prepare the patient and the family for rather prolonged efforts and irregular progress. Only in this way can the necessary continuous treatment be secured and the patient be protected against the ineffective multitude of present-day so-called methods of treatment. Much can be done for immediate relief and final complete or nearly complete restoration. The general experience is hopeful and the patient has the right to this hopefulness. The following additional points in the charted summary of the sixteen cases should be mentioned:

1. Of the thirteen cases with war service only four had been overseas and these had no record of

any war neurosis in France. Hence war experience per se had no particular role.

2. Personality studies showed a defective make-up in nine cases (five inadequate, three unsuitable and one hypersensitive prior to illness).

3. The family histories showed nine with no evidence of neurotic taint obtained at examination and seven with evidence of neurotic taint.

On the whole, then, we have not a resistant stock in these cases.

4. The duration between initial attack and time of examination was two to three years in eleven cases and nine to twenty months in five cases. Of these five cases it is interesting that two cases had marked organic changes with mental deterioration and three cases were already markedly psychoneurotic.

5. Vasomotor disturbances, indefinite pains and lowered general muscular power were present in these cases, but otherwise no organic physical changes.

6. Tremors, increased reflexes and in a few cases old paralyses were noted.

7. The intervals between the acute initial attack and the time of examination showed markedly varying symptomatology, but with the tendency for the psychotic features to predominate. If these features had been recognized early, treatment would have given better and more prompt results.

8. Of the three epileptic and four amnesia cases all showed psychoneurotic features and the diagnoses were not clear. On this account I am inclined to regard them more in the light of psychotic sequelae of epidemic encephalitis.

In these cases we have traced all the histories back to a similar origin; we have seen a similarity in the manner of development; we have found diagnostic features in common for the group; and the end results have special features and special outlook. For our own interests and the interests of the patient it is wise to recognize the psychotic sequelae of epidemic encephalitis.

Personal Data	Initial History	Progress	Present Status	Chief Facts	Outlook	Remarks
1 Aug., 1921 C. M. Fam. History— Nervous mother Per. Hist. Neg.	2 mos. sick 1918 Delirious period with amnesia Diag. Flu. Epi. attacks afterward.	No. of Epi. attacks: 1918—1 1919—No record 1920—5 1921—2 Petit. Mal. frequent.	Past 3 mos. depressed. Suggestible, describes typical. Major attacks. Is suggestible.	Eyes neg. now. Formerly dim vision. Neurological Exam. neg.	Psychoneurotic element most marked at present.	Description of major attacks was typical, evident psychoneurosis also.
2—Aug. 29, 1921 W. J. Fam. Hist. Neg. Per. Hist. Neg.	Sept. 1918 to Jan. 1919 Stupor delirium and diplopia	1920. Headaches, periods of diplopia and somnambulism. Amnesic periods: frequent short and several long.	Dreamy, restless, convergent weakness. Physically reduced.	Diplopia. Dreamy. Amnesic periods.	Uncertain.	Seems suggestive and very dependent upon traveling companion. Never returned as he promised.
3—Aug. 8, 1921 J. R. F. H.—Father apoplexy P. H. Neg.	Sept., 1919 to May, 1920 Stupor, diplopia delirium, left hemiplegia, bowel and bladder incontinence.	Recurrent attack, May, 1921 Some bulbar symptoms.	Left weakness and sl. spasticity. Still bulbar difficulty. Variable diplopia. Is deteriorating and sleepless.	Diplopia. Left hemiplegia Bulbar symptoms. Mod. Dementia.	Bad.	Moderate dementia.
4—Aug. 24, 1921 A. P. F. H. Neg. P. H. Inadequate	Dec., 1919 Stupor, visual difficulty and pain over left fifth nerve.	March, 1921 Improvement slight. Aug., 1921 More hysterical symptoms.	Convergent weakness. Tic left platys myoides. Sensory disturb. left 5th. Speech hesitancy, suggestible.	Diplopia at times. Tic. Hysterical signs	Good.	Returned Feb., 1922, and was much improved. Hysteria.

Personal Data	Initial History	Progress	Present Status	Chief Facts	Outlook	Remarks
5—Sept., 1921 W. E. G. F. H. Neg. P. H. Inadequate	Nov., 1918 Del. and amnesia. In bed 1 mo.; visual difficulty.	Migraine, 1919 Diplopia, 1921 Nervous and hypersensitive.	Tires quickly. Migraine, diplopia, jumps at noises, sleeps poorly.	Diplopia. Tremors. V. M. Stasis.	Guarded.	Neurasthenia prominent.
6—Sept. 15, 1921 L. K. Fam. Hist.—Nervous father P. H. Emotional and unstable	Oct., 1918 Delirium and amnesia with subsequent fainting spells.	Spells of amnesia for periods of some duration 1919—4 1920—3 1921—2 Many short absences.	No fits. Recurrent amnesic periods with automatism. Convergent weakness. Petit mal attacks.	Convergent weakness. Petit mal. Emotional and unstable.	Has lost many jobs.	Amnesic attacks and petit mal.
7—Sept., 1921 W. R. C. F. H.—Parents nervous P. H. Neg.	Jan. and Feb., 1921 Stupor and delirium and fever with indefinite paralyzes	Recurrent attacks, July, 1921.	Mod. left weakness. Is emotional and unstable; has Wass.+++; Convergent weakness.	Remains of left hemiplegia. Convergent weakness. Hysterical.	Improbably syphilitic.	Hysterical. Remains of left hemiplegia.
8—Oct. 25, 1921 G. W. M. F. H. Neg. P. H. Inadequate.	Stupor, visual difficulty and amnesia, Jan., 1921.	Prolonged amnesia and automatism to Oct. 1921.	Convergent weakness. Tremors. Inco-ordination. Occipital pains. Misinterprets sensations.	Diplopia. Tremors. Amnesia. Misinterpretation. Increased reflexes.	Doubtful.	Question of paranoid development at first. Proved psychoneurosis.
9—Nov., 1921 L. A. S. F. H.—Nervous mother P. H.—Changeable, but 7 yrs. good mil. record.	Nov., 1918 Blurred vision, drowsy, fever, unusual conduct	Recurrent periods of drowsiness, headaches and amnesia of short duration.	Recent prolonged amnesia w. stress. Tremors. Nystagmus Diplopia. Rt. angle mouth lower. Suggestible.	Eye symptoms wish mechanism of amnesia. Suggestibility. Increased reflexes.	Conduct disorders made this difficult.	A psycho-neurosis.
10—Dec. 8, 1921 L. R. J. F. H. Neg. P. H. Neg.	Psychoneurosis followed by fever, del., insomnia, left hemiplegia Oct., 1919.	Parkinson syndrome, 1920. Insomnia, has been thought demented.	Drools. Mask face; typical tremors and propulsion and speech. Is fed and dressed but is clear mentally.	Parkinson syndrome. V. M. Stasis. Increased reflexes. Emotional.	Questionable.	Diagnosis of precox had been made. Parkinson sequellae present.
11—Dec. 9, 1921 W. H. F. H.—Mother nervous P. H.—Erratic, impulsive.	Dec., 1918 Flue and partial paraplegia. Aug., 1920 Fever, del., diplopia, insomnia and hysterical symptoms.	Insomnia persists. Periods of hysterical excitement with amnesia.	Partial paraplegia with mod. atrophy. Reflexes upper ++. Reflexes lower dim. Diplopia —. Erratic, emotional and with insomnia. Anxiety periods.	Diplopia. Paraplegia. Hysterical symptoms.	Bad	Psychopathic personality with encephalitis 1920 and markedly psycho-neurotic now.
12—Jan., 1922 C. P. F. H.—Mother nervous P. H. Neg.	Fall, 1919 Del., stupor, diplopia, right hemiplegia.	1920, Parkinson syndrome; good improvement. Became auto-erotic and depressed.	Reflex's all+++ Convergent weakness. Hypersexual. Is emotionally deteriorated. Parkinson Syn. Right weakness.	Diplopia. Rem. Rt. Hemiplegia. Parkinson syn. Psychoneurotic. Hypersexual. Apparent deterioration.	Masturbation stopped. Improvement slow but sure.	Shows great suggestibility emotionality, rather than hopelessness.
13—Jan., 1922 P. H. F. H. Neg. P. H.—Nervous and inadequate, moron 9 B 5.	1919, Fall of. Fever, stupor, del. and blurred vision.	Insomnia persistent. Weak and ineffective.	Diplopia. Complete insomnia; suggestible and emotional. Reflexes+++	Diplopia. Insomnia. Reflexes+++.	Improved with suggestion.	Case drifted from the south to San Francisco without recognition in spite of German report of 22 such cases.
14—Feb. 24, 1922 O. W. F. H. Neg. P. H.—Emotional.	Sept., 1918 Stupor, del., blurred vision and weak afterward.	Headaches, blurred vision and amnesic periods remained.	Diplopia. Recent amnesia. Dreamy. Inc. reflexes.	Diplopia. Inc. reflexes. V. M. Stasis. Amnesic periods.	Recently an epileptiform attack.	Sharp cut amnesic periods persisting suggests possible epilepsy. Is inefficient and fearful.
15—Mch. 11, 1922 R. W. B. F. H.—Nervous mother P. H.—Hypersensitive.	Sept., 1918 Del. and insomnia and diplopia.	Dec., 1921 Vision worse. July, 1920, an hysterical puffing attack. Dec., 1920, fainting attacks, sleep disturbed.	Diplopia. Insomnia. Hysteria with habit spasm, and fainting attack. Nomy oclonus.	Diplopia. Tremors. V. M. Stasis. Inc. reflexes. Hyperaesthesia. Hysteria. Insomnia.	Hysterical symptoms relieved in two days.	Psychoneurosis totally disabling and mild remnants of encephalitis.
16—March, 1922 D. C. F. H. Neg. P. H.—Impulsive, unreliable.	1919, Fall of. Del., blurred vision, fever, insomnia.	Later fainting attacks at irregular intervals and following stress.	Phy. Ex. Neg. Diplopia. Inc. reflexes. V. M. Stasis. Fainting spells with amnesia; suggestible and emotional.	Diplopia. Inc. reflexes. V. M. Stasis. Fainting. hysterical attacks.	Good.	Admitted re epilepsy. Was excessively homesick and business poor.

DIAGNOSIS AND SURGICAL TREATMENT OF MALIGNANT TUMORS OF THE KIDNEY*

By WILLIAM E. STEVENS, M. D., San Francisco

Hematuria, pain and a palpable tumor are generally recognized as the three cardinal symptoms of malignant tumor of the kidney. To these a fourth should be added—characteristic deformity of the renal pelvis—revealed by pyelography. It is only within the last few years that this procedure has been accorded the recognition it deserves as an aid to the diagnosis of renal growths. In a review of 413 cases of malignant kidney tumors reported in the literature, I found that only 44 per cent presented hematuria, pain and enlargement of the kidney at the time of examination. On the other hand, pyelography revealed a deformity of the kidney pelvis or calices in almost every instance in which it was used. Blood in the urine is quite commonly found with renal calculi, tuberculosis and nephritis, and it is sometimes seen in the presence of extra-renal tumors, appendicitis, etc. Braasch states that microscopic blood was found in the urine of six of fifty patients suffering from abdominal growths simulating kidney tumors on palpation, but not involving this organ. Pain is a symptom of almost every pathological condition of the kidney, while enlargement of the kidney is often due to hydronephrosis, pyonephrosis, tuberculosis, cystic conditions and nephritis. Deformities revealed in the pyelogram, such as narrowing or displacement of the pelvis, with or without elongation and narrowing of the calices, however, are almost always characteristic of renal tumor. Enlargement of the pelvis is sometimes seen in carcinoma and is due to necrosis of the tumor or to an associated hydronephrosis. Ordinary radiography should, of course, precede pyelography, as stone shadows are usually more readily detected in the uninjected picture.† Visualization of the gastro-intestinal tract by air inflation or by barium meals or enemata is often of great assistance in determining the location of an abdominal mass. Other aids to diagnosis are the occasional presence of neoplastic cells in the urine and the profuse bleeding which sometimes follows the traumatism caused by an ureteral catheter. In a series of 215 cases of hypernephroma, eighty-six of carcinoma and forty-seven of tumors of the renal pelvis in which my own cases were included, a tumor mass was present in 85 per cent, a deformity of the renal pelvis in 84 per cent, blood in the urine in 44 per cent, and pain in 44 per cent.

Differential Diagnosis—The differential diagnosis of the various histological types of malignant tumors of the kidney is at times impossible, but a careful study of the symptoms together with the cystoscopic and radiographic findings will make this feasible in many instances. The following facts are of diagnostic significance.

Hypernephroma—Eighty per cent of the malignant tumors of the kidney are hypernephromata.

Repeated hemorrhages, pain and a palpable tumor which increases rapidly in size are strongly suggestive of this type of growth. With hypernephroma a palpable tumor is present in 85 per cent, a deformity of the renal pelvis in 84 per cent, hematuria and pain in 43 per cent respectively. Pain is most marked with hypernephroma because of the pressure due to the large size of the growth. Hypernephroma is more common in patients over 30 years of age. Calculi are less frequently associated with hypernephroma and tumor of the renal pelvis than with carcinoma. In hypernephroma a narrowing of the pelvis is usually found. Varicocele due to blocking of the renal vein and oedema of the lower extremities due to obstruction of the ascending vena cava are sometimes seen with hypernephroma. Dilatation of the veins of the bladder is not uncommon. The kidney function is decreased in many cases and not infrequently absent. Cachexia appears late.

Carcinoma—About 2 per cent of the malignant tumors of the kidney are carcinomata. A palpable tumor is only found in about 18 per cent of these cases, as death from metastases usually occurs before the tumor has attained much size. Deformity of the renal pelvis was observed in almost every case in which pyelography was used, hematuria in 56 per cent, and pain in 38 per cent. Although a frequent symptom, hematuria is less pronounced than in hypernephroma and papillary epithelioma. If the carcinoma involves the pelvis, dilatation of the latter due to necrosis is not infrequently seen in the pyelogram. Carcinoma usually occurs in patients over 40 years of age. Calculi are frequently associated with carcinoma, occurring in 66 per cent of the cases. Cachexia appears early.

Papillary Epithelioma of the Renal Pelvis—Hematuria is usually present at some time. It occurred in 97 per cent of the above series of cases. Pain and a palpable tumor are found in approximately 50 per cent of these cases. Pyelography reveals deformity of the pelvic outline in almost every case. Dilatation of the pelvis is not uncommon. This type of growth is seldom seen in patients under 40 years of age. Calculi are found in 20 per cent of these cases. Metastases in the bladder and ureter are common.

The following cases present features of unusual interest:

CASE REPORTS

Case 1. G. D. M., referred by H. J. Sartori. An Italian fisherman, 47 years of age, married, entered the hospital complaining of constant pain in both lumbar regions, worse on the left side, and nocturnal frequency of urination. He had never noticed any blood in the urine, but microscopically, a small number of blood cells, in addition to many pus cells, bacteria, and a heavy cloud of albumin, were found. Examination revealed a marked enlargement of the left kidney. Culture of the urine showed a colon bacillus infection. The urine obtained from the right kidney, following ureteral catheterization, contained an occasional pus cell, that from the left kidney a large number of pus cells. Radiographs of the uninjected kidneys showed enlargement of both kidneys and multiple stone formation in the left kidney. Pyelography revealed an irregular and marked enlargement of the left renal pelvis and obliteration of its calices. A double pelvis

*Read before the Section on Urology of the Medical Society of California at Yosemite National Park, May 17, 1922.

†Occasionally, however, calculi are more easily seen because of the opaque coating formed by the injected solution.

and a double ureter were present on the right side, the ureter bifurcating as it crossed the pelvis. Two or three small round shadows were seen at the level of the upper part of the lower pelvis, apparently in its upper calyx. Operation revealed a markedly enlarged, adherent, pyonephrotic left kidney, with stone formation, calcification of the walls of the pelvis and destroyed calices. Several irregularly shaped stones and a large amount of grayish red sand were also present. The kidney parenchyma was firm and fibrous, and somewhat irregular in coloration. Microscopical sections showed part of the normal kidney tissue replaced by heavy fibrous tissue in which were a few spaces filled with remnants of kidney tubules, some collapsed and others containing casts. Large irregular spaces filled with a typical squamous epithelium and epithelial pearls were found in others. There were also many mitral figures present in areas of more recent growth. The growth had developed from the epithelium of the renal pelvis.

Diagnosis: Primary squamous cell carcinoma, nephrolithiasis and pyonephrosis of the left kidney. Following operation, the patient's condition improved, although he still complained of some pain in both lumbar regions. He returned to the country and died three months later of general carcinomatosis.

Comments: Pain, tumor, blood in the urine and deformity of the renal pelvis were present in this case. It is of interest not only because of the marked infrequency of primary squamous cell carcinoma of the kidney—it has been estimated that not over 2 per cent of malignant tumors of this organ are carcinoma—but also because of the interesting anomalies and complications accompanying it. Chronic inflammatory changes due to nephrolithiasis and infection are probably important factors in the etiology of renal carcinoma. The Mayo Clinic reports that 64 per cent of the cases of carcinoma seen by them were complicated by kidney stones.

Case 2. From the Surgical and Genito-Urinary Departments of Mount Zion Hospital. Hypernephroma of the adrenal gland. This condition is very rare and it is often impossible of differentiation from tumor of the kidney. A diagnosis is seldom made prior to operation. The cardinal symptoms of a kidney growth, hematuria, pain, tumor and a deformity of the renal pelvis were all observed in this case. The marked flattening of the renal pelvis, seen in the pyelograms, was due to pressure upon the kidney. Neither the latter nor its capsule were involved in the growth. Many interesting features were present in this case and it will be reported in detail at some future time.

Case 3. From the Genito-Urinary Department of Mount Zion Hospital. M. S., aged 70, single, a bartender, had suffered from slight pain in the right lumbar region during the past year. He had noticed blood in the urine for the past twenty-four hours. In 1913 he had noticed blood in the urine and was troubled with frequent urination. Cystoscopy at this time revealed a pedunculated papilloma on the left of the left ureteral orifice. The symptoms disappeared following the removal of the tumor with snare and cautery. In April, 1918, he again entered the hospital because of hematuria. Examination of the urine at that time disclosed many blood cells, a trace of albumin and a few pus cells. Cystoscopy revealed an inflamed bladder mucosa and a somewhat bloody urine escaping from the right ureteral orifice. Comparative functional kidney tests were negative. The urine was free from blood at the end of a week and the patient left the hospital. Six months later he re-entered, stating that he had suffered from pain in the right lumbar region for the past year and had noticed blood in the urine for the past twenty-four hours. Cystoscopy again revealed bloody fluid

escaping from the right ureteral orifice. The bladder mucosa was normal. Functional kidney tests gave diminished values on the right side. Radiography and the wax-tipped catheter showed no evidence of calculi. Pyelography demonstrated the right kidney pelvis to be somewhat elongated laterally and the ureter entering the pelvis at a right angle. A diagnosis of tumor of the kidney was made and operation advised and accepted. A large papilloma, the size of a walnut, was found when the pelvis was opened. No evidence of ureteral involvement was present. Fourteen months later he again entered the hospital complaining of slight pain in the region at the site of the old scar. He stated that he had been in excellent health since the operation. Cystoscopy revealed a small sessile papilloma at the site of the right ureteral orifice. No other symptoms were present. The papilloma was fulgurated. Nine months later he re-entered the hospital for examination. The papilloma, which was a little larger than at previous examination, was again fulgurated. Up to the present time the papilloma has been fulgurated seven times and radium applied on six different occasions.

Comments: Notwithstanding the apparent freedom from ureteral involvement and the removal of as much of the ureter as possible through the nephrectomy wound, total ureterectomy, as now generally advised, would have perhaps been the better surgical procedure. This question is debatable, however, in the light of the subsequent course of the case. To begin with, the patient was 70 years of age at the time of the nephrectomy, and ureterectomy would have added materially to the risk of operation. The man is now 74 years of age and apparently in good health. He has gained in weight and states that his health is better than it has been in many years.

Case 4. From the Genito-Urinary Department of the Mount Zion Hospital. H. S., aged 29, single, occupation suit cutter, complained of pain in the hypogastric and left iliac regions and frequent and painful urination of two months' duration. A catheterized specimen of urine contained a large number of pus cells, and a few blood cells. No tubercle bacilli were found. Cystoscopy revealed a somewhat infected bladder mucosa. The urine from both kidneys contained a large number of pus cells. Culture showed a bilateral colon bacillus infection. Functional kidney tests revealed a marked diminution of function on the right side. The kidneys were normal in size and position, but pyelograms demonstrated a long, narrow pelvis displaced laterally, with calices obliterated, on the right side, and on the left side a small pelvis with some narrowing and elongation of the major calices.

Diagnosis: Probable tumor of the right kidney with pyelonephritis of both kidneys. Very little relief followed lavage of this patient's renal pelvis. As in the preceding case, the question of treatment is of interest. Because of the questionable condition of the left kidney, I have not considered a right-sided nephrectomy advisable.

Case 5. Referred by Dr. R. Pietrafesa. A married Italian bootblack, 27 years of age, complained of frequent urination during the day and urgency of six weeks' duration. He had lost ten pounds during the past year. The two-glass test showed an equally large number of pus cells in both specimens of urine. No blood cells were present and no tubercle bacilli were found. Urethrascopy revealed an enlarged, irregular verumontanum, with a small papilloma on its left side. Cystoscopy revealed a slightly injected bladder mucosa. The urine from the right kidney was microscopically negative, that from the left kidney contained a large number of pus cells. Functional kidney tests gave about equal values on both sides. Nothing abnormal was seen on ordinary radiography, but

pyelography revealed a marked narrowing, undoubtedly due to pressure on the calices of the left renal pelvis, also a dilated left ureter.

Diagnosis: Tumor of the left kidney. Papilloma of the verumontanum. Verumontanitis. This kidney should be removed.

Treatment: In deciding upon the treatment of a malignant tumor of the kidney it must be remembered that, although an occasional report of spontaneous cure of hypernephroma has been recorded in the literature, the prognosis with this, as with all malignant tumors, is practically hopeless without operation. In view of this fact the kidney should be removed in almost every instance unless associated with definite metastases. Even in the presence of this condition, severe pain, intestinal obstruction or hemorrhage sufficiently profuse to threaten the life of the patient, are indications for operation. A single metastasis which is accessible, is not a contra-indication to surgical interference, but should be removed at the time of nephrectomy. The X-ray and radium are occasionally of value following operative procedure. Michaelsson of Stockholm reports seven of thirty patients operated upon for hypernephroma of the kidney alive fifteen, twelve, nine, seven and four years after operation. The difficulties encountered in the removal of malignant tumors of the kidney are due to adhesions, friability and to the large size of the growth. If the fatty capsule is involved, it should be removed with the kidney. This necessarily includes removal of the suprarenal capsule. The lumbar or extraperitoneal route is preferable for the removal of small or medium sized tumors and the abdominal route for large growths. The complete operation involves the removal of the kidney, the perinephritic fat, together with the suprarenal capsule and the lymphatic vessels and glands in one mass. The incision best suited for this purpose consists of a vertical portion which runs from the tip of the eleventh rib to a point just behind the anterior superior spine of the ilium; from either end of this an incision is carried forward, one following the costal margin, the other the crest of the ilium. The length of these incisions depends on the size of the tumor. A flap consisting of the whole thickness of the belly-wall is thus turned forward from the flank. This incision gives an excellent exposure of the kidney and its pedicle. In all operations the renal vein should be ligated as far as possible from the kidney. Early ligation prevents the squeezing of the malignant cells into the general circulation following the manipulation of the kidney. In papillary epithelioma of the renal pelvis the entire ureter should usually be removed with the kidney, as involvement of the ureter occurs later if not already present.

(Flood Building.)

Climate as a Factor in the Treatment of Tuberculosis—There is no specific climate for the treatment of pulmonary tuberculosis; that no one climate is suitable for all cases of the disease and that it is becoming more and more the consensus of trustworthy opinion that tuberculosis can be successfully treated anywhere under a proper regime of rest, fresh air, diet and time.

There is no conclusive evidence to lead us to believe that high altitude is of any specific influence in the disease.

On the contrary, the great majority of the tuberculous and particularly those in the advanced stages are harmfully influenced by altitudes above from one thousand to two thousand feet.

Indigent consumptives, especially those in the advanced stages of the disease, should not be sent to high and distant climates.

It is important that these facts become of more common knowledge among physicians and the laity—(H. Schwatt, M.D., New York Medical Journal and Medical Record, January 3, 1923.)

ORIGIN AND APPLICATION OF THE PIRQUET NEM SYSTEM OF CHILD FEEDING, UNDER THE HOOVER RELIEF ADMINISTRATION OF AUSTRIA*

By HERBERT M. COULTER, M. D., South Pasadena

The origin of the Pirquet Nem System of child feeding is so closely related to the operations of the Hoover Relief Administration in Austria, that it is necessary to say a word about the latter before going into the merits of the Nem System.

With only a few picked Americans to supervise and a vast army of volunteer Austrians to do the work, Mr. Hoover was able, as I observed during the winter of 1920-1921, to furnish 300,000 children with an average daily supplementary meal equal in food value to one quart of milk, for the very low cost of 7 cents per meal, including overhead expenses. As there were more than a million children in Austria and only a limited quantity of food available, Mr. Hoover invited Dr. Clemens von Pirquet, professor of pediatrics in the University of Vienna, to assume the responsibility of making a physical examination of all the children, and then determining which children should be fed, and also the kind and quantity of food to be given. Professor von Pirquet, after making a preliminary survey, threw up his hands in dismay and said that the job could not be done. He was thinking that experience had shown that the caloric system, which has up to now been employed in calculating the nutritive value of foodstuffs, although it is of the highest scientific value, yet is too complicated and too apt to become purely theoretical to be readily applicable to everyday use. On second consideration he decided to overcome this difficulty by developing and using the NEM SYSTEM, which provides a very simple means of calculating the nutritive value of food, and is better adapted to practical use in our kitchens than the caloric system.

The word *nem* he derived from the three initial letters of the words, "Nahrung-Einheit-Milch," meaning in English, "Nutrition-Element-Milk." By a strange coincidence the initial letters are the same in both languages, and the word NEM stands for a certain quantity of any foodstuff of the same nutritive value as one gram of ordinary milk. Taking the metric system as a basis, the nutritive value of milk would be described as follows:

1 gram of milk is equivalent to 1 nem, abbreviated to 1 n.

100 grams of milk are equivalent to 1 hectonem, abbreviated to 1 hn.

1000 grams of milk are equivalent to 1 kilonem, abbreviated to 1 kn.

Needless to say, the 100 nem or hectonem is the most common measure for rationing purposes, and for this reason Professor Pirquet had an aluminum scoop or ladle made for each essential commodity, graduated to measure one or more hectonem. In this way it was a simple matter for the volunteer helper to ration out an average 10 hn. meal varying more or less according to the prescription of the physician in charge. Consequently, in speaking of a 10 hn. (1 kn.) meal, we mean the amount of

* Read before the Pediatric Section, California Medical Association, Yosemite, May, 1922.

food equal in nutritive value to 1000 gms. or 1 liter or 1 quart of milk.

According to the Nem System, *milk*, which should be the principal element in a child's diet, is made the basic food, and the gram, which equals 1 NEM of nutrition, is the standard unit of measurement. It also follows that the 1000 NEM contained in the quart or liter of milk, is a much more convenient number to handle than 667 calories according to the caloric system.

Professor Pirquet, in developing further the Nem System of rational feeding, whether it be applied to children or adults, coined certain abbreviated terms, such as Siqua, Decinem, Pelidisi, Sacratama, and laid down these fundamental points:

1. The relative nutritive value of foodstuffs as compared with ordinary milk.
2. The quantity of food required for the nutrition of a single individual.
3. A method to determine which individuals require supplementary food when dealing with under-nourishment.

(1.) a. The relative NEM value of the most essential food elements:

- 1 gram ordinary milk = 1 NEM.
- 1 gram starch = 5 NEM.
- 1 gram sugar = 6 NEM.
- 1 gram fats = 13 NEM.

b. The relative NEM value of the most essential foodstuffs:

- 1 gram ordinary milk = 1 NEM.
- 1 gram potatoes = 1.25 NEM.
- 1 gram evaporated milk = 2 NEM.
- 1 gram lean meat = 2 NEM.
- 1 gram egg = 2.5 NEM.
- 1 gram beans = 4 NEM.
- 1 gram condensed milk = 5 NEM.
- 1 gram flour = 5 NEM.
- 1 gram rice = 5 NEM.
- 1 gram fat meat = 5 NEM.
- 1 gram sugar = 6 NEM.
- 1 gram cocoa = 6 NEM.
- 1 gram butter = 12 NEM.
- 1 gram lard = 13 NEM.

To visualize this simple method and make it seem practical, let us apply it to a 1000 NEM or 10 hn. supplementary meal, such as was given the undernourished Austrian child:

Condensed milk.....	40 grams =	200 NEM.
Rice	100 grams =	500 NEM.
Sugar	17 grams =	100 NEM.
Bread	40 grams =	200 NEM.

1000 NEM.

(2.) A simple and practical method of determining the quantity of food necessary to nourish a single individual:

For years Pirquet had not been satisfied with the age or standing height, together with the weight, as an index of nutrition. After he had investigated thoroughly on his own part, and taken advantage of the observations of Vierdort-Meeh and others, he became convinced that the surface of the digestive tract was the best index. As this measurement could not be determined on the living person, it was necessary to find some dimension which was

equal to the surface of the digestive tract. This proved to be the sitting height squared, excepting only in cases of bodily deformity, particularly curvature of the spine. The sitting height of an infant may be measured by placing the baby on a table; that of a child or adult by having it sit on a straight-backed chair, both table and chair being arranged with a metric rule.

On going farther it was found that the sitting height squared in centimeters (abbreviated to SIQUA) represented the MAXIMUM number of NEM which the individual could ever utilize, and that three-tenths (abbreviated to three DECINEM) of this number was the MINIMUM number of NEM required for metabolism alone. Somewhere between the MAX. and the MIN. was the ideal or OPTIMUM number of NEM necessary to nourish the individual. The OPTIMUM varies according to the degree of growth and exercise, and would be estimated according to the following rule:

- (A) A young infant lying and sleeping requires for metabolism $3/10$, plus $1/10$ for growth = 4 decinem siqua.
- (B) An infant sitting up requires 5 decinem siqua.
- (C) An infant standing up requires 6 decinem siqua.
- (D) A child able to run and play (including school children) requires 7 decinem siqua.

For example, let us determine the quantity of food necessary for a child about 10 years of age and with a sitting height of 70 centimeters.

(A) We must find the SIQUA, which is the sitting height squared, or 70 times 70 = 4900.

(B) We must find 7 decinem SIQUA, which is 4900 divided by $7/10$ = 3430, or approximately 35 hn.

(C) We should divide the 35 hn., as is the custom in Austria, into the five daily meals necessary for a child. This is done by giving 10 hectonem for each of the three regular meals, with 2 hn. for the forenoon and 3 hn. for the afternoon luncheons, making a total of 35 hn. for the day, which is elaborated and visualized by illustration No. 2. (In America the 35 hn. would be divided according to a three-meal schedule.)

(3.) a. To determine the *percentage of nutrition* one must find the PELIDISI, which, as Professor Pirquet laid out, is expressed by the formula, "The cube root of ten times the weight divided by the sitting height," which should equal 1 or 100 per cent when applied to a normal child. This is based on the fact that there exists a certain definite relation between the sitting height and the weight. (Note that from 94 per cent to 100 per cent may be considered within the limits of normal health, while below 94 per cent is under, and above 100 per cent is overweight.) Using this formula, it is plain that if the weight increases relatively more than the sitting height, the PELIDISI will be more than 100 per cent; if relatively less, then the PELIDISI will be less than 100 per cent. If one knows the weight and sitting height, one can quickly determine the PELIDISI or percentage of nutrition by using an engineer's slide rule or one of Pirquet's tables.

b. To determine the *physical condition* one must

find the SACRATAMA. (Definition: S. stands for Sanguis or quality of blood; Cr. for Crussitudo or fat contents of skin; T. for Turgor or tension of skin due to water contents; and M. for Musculus, indicating muscular development.)

Each of these four consonants is followed by a vowel, indicating degree. i—indicates excessive; e—indicates abundant; a—indicates normal; o—indicates slightly reduced; u—indicates greatly reduced.

Examples—Referring to Pirquet's table, we find that if a child has a sitting height of 68 cm. and a weight of 23.3 kilos., his PELIDISI equals 91 per cent, or 3 per cent below the limit for normal health; while a child getting the classification of So Cr Te Mo would be interpreted as pale, rather fat, pasty-faced and of weak muscular development.

PELIDISI and SACRATAMA may be used to good advantage in determining which individuals require supplementary food when dealing with undernourishment.

Summing up the three points outlined above: One need not guess how much food a given child needs, nor does one measure the food requirements according to age or standing height of the child. The aim of Professor Pirquet was to work out a scientific and at the same time a practical method which would be easily understood by the laity as well as by the doctors.

In taking up the "application of the NEM system under the Hoover administration," I will say that, while in Austria, I saw the system used in the feeding of 300,000 badly undernourished children, and it was decidedly successful.

Method. The doctor and two assistants examined the children sometimes at the rate of 200 per hour, the children having been previously weighed and measured. Those with a PELIDISI below 93 per cent, or a SACRATAMA with two points below normal, were given a card for a daily supplementary meal.

The food was stored and prepared in large central kitchens, which were usually located in the

basements of former castles. From here it was delivered hot in double-walled containers to feeding stations, usually schools, where the child was obliged to eat his meal in sight of the supervisor, using his own cup, spoon and plate. This requirement insured that the proper child ate the meal, and by his furnishing his own utensils the overhead expenses were kept down. Each month when the children were re-examined, a class graduated and others from the waiting line took their places.

I was shown the roof garden of the Kinderspital, where Professor Pirquet attends 100 pre-tubercular children. Here the children sleep under a slant roof, live in the open air, and are fed exactly as were the larger groups, with three exceptions:

a. The children are re-examined every week.

b. The quantity of food for each child is estimated exactly according to his individual DECINEM SIQUA.

c. The children get *all* their meals on the NEM basis, and are arranged about tables marked 20, 25, 30, 35, etc., according to the number of hectonem the child is receiving per day. (Note—This classification has nothing to do with the age of the child.)

So accurately was the quantity of food estimated for each child that this infallible rule was laid down: "The child must clean his plate before leaving the table." The child seemed satisfied with the amount and seldom did I see one ask for a second helping, and yet the nutrition and growth of the children seemed to be uniformly satisfactory.

I was then shown the outpatient department of the same hospital, where about 400 children were examined daily. Here the nurse would weigh and measure each nutrition case and pass it on to the doctor, who, in the twinkling of an eye, would formulate the PELIDISI (degree of nutrition), the SACRATAMA (physical condition), the DECINEM SIQUA (percentage of sitting height squared), and finally prescribe the kind of food. The nurse would then instruct the mother, in terms of spoonfuls and cupfuls, how to measure and prepare the food.

Diet-Scheme for Child 10 years old, with Sitting Height (Si) = 70 cm., Nutrition Need = 7 Decinemsiqua (dnsq.) = 35 Hectonem (Hn.).

35 Hectonem (Hn.).												Protein Dn. + —
Hn.		+ 1, 100 g.	+ 1 Milk 100 g.	— 1 Sugar 17 g.	— 30 g.	— Bread 30 g.	— 30 g.	— 1 Butter 8.5 g.	— 1 8.5 g.	1 Marmalade 30 g.	— 1 30 g.	— 3
6h	10											
9h	3	+ 2 1 Egg	— Bread 30 g.	— 30 g.								+ 2
12h	10	— 100 g.	— Soup 100 g.	+ 5 Meat 40 g.	— 50 g.	— Vegetable 50 g.	— 50 g.	— 30 g.	— Mush 30 g.	— 30 g.	— ½ Apple 150 g.	+ 4½
3h	2	+ 1 Milk 100 g.	— Bread 30 g.									+ 1
6h	10	— 100 g.	— Soup 100 g.	— 50 g.	— Vegetable 50 g.	— 50 g.	— 15 g.	— Meat 15 g.	— 30 g.	— Bread 30 g.	+ 3 Cheese 20 g.	+ 3
	35											+ 7½ Dn.

A diagram visualizing the division of meals, variety and quantity of food, and the percentage of protein which go to make up the daily ration of an individual, viz.:

A. 1st perpendicular column shows the hours for meals.
B. 2nd perpendicular column indicates the amount of food for each meal in hectonem.

C. 3rd perpendicular column indicates the total amount of protein more or less than the normal amount (10 per cent) for each meal.

D. Each little square in the horizontal columns contains 1 hectonem (hn.) and indicates the kind and quantity of food necessary to furnish 1 hn. of nourishment. Also a dash indicates that 1 hn. of food contains one decinem of 10 per cent of protein, which, according to Pirquet, is the normal amount for a growing child. Plus or minus signs indicate the relative amount of protein contained in other foods which have more or less than the normal amount. Thus: Bread contains 10 per cent or the normal amount of protein, while milk contains more and sugar less than the normal amount.

THE PRESENT STATUS OF THERAPY IN PULMONARY TUBERCULOSIS *

By WILLIAM C. VOORSANGER, M. D., San Francisco
(From the Oaks Sanitarium, Los Gatos, California)

There can be no more important matter in all medicine for discussion than the treatment of a disease which is still responsible for approximately 10 per cent of all deaths. The death rate in New York City for the past ten years has dropped from 266 per hundred thousand to 123 per hundred thousand, over 50 per cent. This splendid showing will apply to any district in the United States where a well organized campaign has been waged.

How short a time—within the recollection of most of us here tonight—it is since tuberculosis spelt death! How different today, when we can, without fear of contradiction, state that 80 per cent of all beginning cases can be arrested and that practically all tuberculosis is preventable.

Some physicians practicing twenty-five years ago did not tell their patients they had tuberculosis. They were consoled with a diagnosis of bronchitis and sent to the desert or to the mountains to live as long as they could. Today, the physician is remiss in his duty who does not tell his patient the nature of his disease as soon as the diagnosis is certain, because he can hold out hope of definite arrest and restoration to useful existence if the right and proper line of conduct and treatment is pursued.

No treatment in tuberculosis or any other chronic disease can be successful without a rational co-operation between physician and patient. This co-operation is only possible when the patient knows he has tuberculosis instead of a bad cold, pleurisy or bronchitis. No treatment in tuberculosis can be successful without individualization and without a close study of the patient's psychology. It has been my unalterable custom for years to closely observe my patient for at least four weeks after admission before undertaking any special line of treatment. This has a two-fold advantage: First, one gains an exact knowledge of the patient's pathology; second, one learns the peculiarity of his patient's temperament. Not understanding our patient's psychology is responsible for the successful operation of various cults so inimical at the present time to regular medicine. In our desire to try new lines of treatment, some of us sometimes forget the patient. We should study the host more instead of the parasite which feeds on him, and our future results may be better. If we sum up the advances of the past twenty-five years in the treatment of all chronic constitutional diseases, we must conclude that our knowledge and understanding of disease has been greatly augmented; but also, that the net result of all our attempts at successful medical treatment has been small. This applies particularly to tuberculosis. We have learned all about its direct and indirect causes. We have accomplished wonders in its prevention, but we are really as far from a specific cure as ever, although nearly forty years have

passed since Koch discovered the tubercle bacilli. During this period, many vaccines and drugs have been tried, but unsuccessfully. Over one hundred different forms of tuberculin have been put on the market, each with its advocates, each to be tried and then relegated to oblivion. Tuberculin has been unsuccessful because it is a toxin, not an anti-toxin. It is the product of the tubercle bacillus. It adds nothing new to the system because the tuberculous patient constantly manufactures tuberculin within himself. There can be little difference in these various forms of tuberculin, because they all have the same origin.

Must we not pause and seriously reflect when we contemplate that forty years of scientific research on the tubercle bacillus by the best laboratories and medical minds have failed to produce a specific vaccine; that the same work on tuberculosis in human beings and animals have failed to produce a serum? Is there not a very definite reason for this failure? We explain it with the statement that the tubercle bacillus does not circulate in the blood—that it is locked up in the tissues and only its toxins travel through the system. We also know that the tubercle bacillus has an impenetrable waxy capsule, which cannot be dissolved or penetrated by known methods. If these facts are true, then we shall probably never find the specific for tuberculosis through vaccine therapy!

Let us now review the various present-day methods at our command in the treatment of pulmonary tuberculosis. These divide into

1. Drug treatment.
 - (a) Organic extracts.
2. Vaccine therapy.
3. Artificial pneumo-thorax
 - (a) Thoracoplasty.
4. Heliotherapy.
5. Hygienic and dietetic treatment.

It would be futile to attempt to recount all the ethical and non-ethical medicinal preparations which from time to time have been exploited. Cod liver oil held its sway for many years, and many physicians still believe in its efficacy. Creosote was once hailed as a specific because it inhibited cough and is still largely in use under its own name, or some trade-name such as Creosotal or Calcreose. I have never seen any worthwhile result from creosote or its compounds, but have often watched a fair digestion ruined by it. Various tonics have a definite place in tuberculosis therapy, as stimulants to appetite, as "blood-builders," in an effort to increase resistance, but they should not be heralded as cures, nor should they so be considered by physicians. I have found that the best way to administer a tonic is hypodermically. I use cacodylate of soda, 10 per cent, very consistently, to the exclusion of cacodylate of iron. Years of experience with both preparations have convinced me that any efficacy to be derived from their use lies almost wholly in the cacodylate, not the iron or soda, and since the former is more painful, why not employ the latter? I am also convinced that intra-venous therapy is unnecessary.

* Read before a meeting of the Spokane (Wash.) Medical Society, October 12, 1922, and the Portland Medical Society, October 18, 1922.

Any vaccine or drug will be absorbed when placed under the skin in sufficient time to accomplish its effect. If there is more rapid absorption through a vein, which is not proven, the increased jeopardy to the patient by the latter method is out of proportion to any gain by it. The only excuse for intra-venous therapy is where a large quantity of a solution has to be used, as in salvarsan, or where injecting under the skin will cause necrosis.

Calcium has a definite place in our drug therapy. The lactate sometimes acts very well in hemorrhage, and calcium chloride, 5 per cent, is of great use in abdominal pain, whether due to errors of diet or to intestinal tuberculosis. It inhibits peristalsis and gives great relief for days at a time. This drug is given intra-venously, starting with 2 cc. increasing to 4 or 5 cc. after four days, and repeating the maximum dose in four days to one week, if necessary. One often sees cessation from pain in twenty-four hours. The method, of course, is not always efficacious.

A word about the use of narcotics. We need morphine, heroin and codeine in the treatment of such symptoms as hemorrhage, cough and pain, but we must be conservative in their use, because a tuberculosis patient can easily be converted into a drug addict.

Organic extracts have no place at present in the treatment of pulmonary tuberculosis. With the exception of pituitrin, which will sometimes stop haemoptysis, they accomplish nothing and often do harm. I have given leucocytic and lymphoid extract and have almost invariably produced hemorrhage. Splenic extract is now being tried—so far without result. Various endocrin products are recommended for tuberculosis, as well as for every other known disease. The study of the endocrin glands is in its infancy. With these products we are again making the vital error of paying no attention to the "host." The practitioner is being exploited by the advertising laboratory, and some of them in turn are doing an injustice to their patients.

Nuforal—A recent nuclein preparation heralded as a tuberculosis cure is nuforal. I personally visited the laboratory in New York, where nuforal is manufactured; was given sufficient ampules to use on ten patients, and promised to report my results. I have had no success, although employing it conscientiously and according to instruction over a period of three months, the time supposedly required for a "cure." I used nuforal because I believe that every widely heralded "cure" should be tried out accurately by someone willing to publish his results, if only to establish, as in this case, that the remedy has nothing but commercial value. The Nuforal laboratory in June showed me a list of over two hundred persons whom they claimed were physicians in the United States and who they also claimed were using their "cure" for pulmonary tuberculosis!

Chaulmoogra oil, I am sorry to say, has failed to live up to the great hope that every study of this drug inspired. After the rather remarkable results accomplished by Dean and MacDonald

with the ethyl ester in the treatment of leprosy, it was thought that similar success might be achieved in pulmonary tuberculosis. Walker at the Hooper Research Laboratory of the University of California, after two years' experimentation on animals, with a chaulmoogra oil ester of his own, states that he sees no effect on tuberculous lesions. I was one of those permitted to use both the Dean derivatives of chaulmoogra oil from Honolulu and Walker's preparations from San Francisco. I tried them on fairly well advanced patients for a period of six months, starting with 1/10 cc. and increasing to 2 cc., injecting inter-gluteally. The clinical results were nil, and still reputable chemical firms are advertising a commercial preparation of chaulmoogra oil as a cure for tuberculosis. Some physicians are using this drug on their patients, thus losing valuable time in the application of other more efficacious methods. The failure of chaulmoogra oil in the treatment of tuberculosis was a keen disappointment because I believe that a specific for tuberculosis will be found along chemical rather than bacterial lines.

Vaccine Therapy: We have two classes of vaccines—autogenous and stock—the former being made directly from the sputum, the latter from a culture of tubercle bacilli. Much work has been done during the past two years by competent investigators in culturing sputum, and in preparing a vaccine from pure culture of the various strains obtained directly from washed sputum. The results in conditions, such as chronic bronchitis, asthma, and non-tuberculosis have been encouraging. I have seen chronic coughs of years' standing get well, and asthma, not due to a pollen or protein, improve remarkably under a course of autogenous vaccine injection. But I have rarely seen a vaccine made from tuberculous sputum accomplish anything. This fact alone should convince us that mixed infection plays but a small role in the production of such symptoms as fever, night sweats, loss of weight, loss of appetite and nausea, the syndrome usually considered as indicating toxemia. The tubercle bacillus itself produces sufficient toxine to cause all the toxemia usually met with in tuberculosis and a mixed vaccine could have little effect.

Tuberculin, toxins, and stock vaccines, have fallen largely into disrepute of late years. It would be useless and unnecessary to take you back through the decades since Koch electrified the world with his announcement that he had an absolute cure for tuberculosis in tuberculin, or to dwell upon Trudeau's statement that after using tuberculin for twenty-five years he was convinced that more patients were alive who had received it than those who had not. Is it any wonder that many of us became extensive users of this once heralded specific? I was an ardent believer in the efficacy of tuberculin until three years ago, when I practically discontinued its use. I used it both in sanitarium and ambulant practice for a period of ten years, in every afebrile case, and must confess that my published viewpoint of a few years ago has somewhat changed. Tuberculin, however, properly employed, beginning with very small doses

and gradually increasing without reaction until a tuberculin tolerance is achieved, never harmed anyone and in many cases helped toward an arrest. The psychology in its administration was always greater than its therapeutic value. Bullock, who recently reviewed his twenty years' experience with fifteen hundred cases, states that in the third five years when he was using tuberculin his results were better than in any other period. He attributes this to the fact that patients receiving tuberculin stayed longer at the sanatorium than those who did not, thus permitting other methods of treatment to become effective. Perhaps in this way we can also account for Trudeau's experience.

Remember always, tuberculosis is a disease of undernutrition and lowered resistance. To secure favorable results resistance must be raised—this requires time, often lots of time—and the patient must receive some definite form of treatment upon which to pin his faith while nature is being assisted. Tuberculin, never a specific, might still be largely used as a valuable adjuvant if used wisely. Many have used it improperly and produced untoward results. Some apparently did not appreciate the fact that the tuberculous patient manufactures tuberculin at all times, that antibodies are constantly produced, and that artificial tuberculin, if it accomplishes anything at all, simply stimulates these antibodies, or they might better be termed "natural defenses."

Tuberculin cannot introduce anything new. Still, after all these years with the proven failure of Koch's tuberculin, and its various modifications under different names, we have scientists announcing new specifics in the products of the tubercle bacillus. One of the latest is Much's "Partigens" or partial antigens.

Much comes forward with the announcement that the cure of tuberculosis lies in the non-toxic rather than the toxic product of the tubercle bacillus, claims to have isolated this product, demonstrates its efficacy on tuberculosis in animals, and proceeds to make many, particularly in Germany, use it on human beings. His clinical associate, Deike, is more conservative, stating in his recent book that partigen is merely a mild form of tuberculin, safe in its use, and which does not produce temperature or other measurable reactions. We have a right to ask Much why the non-toxic product of the tubercle bacillus is more specific in its action than the toxic. He states this, but he does not prove it.

Koch, before he announced tuberculin as a cure for humans, also experimented for years on animals. He cured tuberculosis to his own satisfaction in animals, and still he has been proven wrong, as regards the efficacy of tuberculin in humans. Much and his associate to date have shown some results in surgical and gland tuberculosis, not better, however, than those accomplished by ordinary tuberculin. We have as yet to see any report on the successful cure of pulmonary tuberculosis by the administration of "Partigens." I do not want to appear as discouraging new investigations, but I do deplore the fact that

so many remedies still in the experimental stage, are heralded to the public as cures.

Tuberculin still has its place in our tuberculosis armamentarium. It should not be discarded; it should be used sparingly, cautiously, and only in the case which is not progressing with other methods. We at one time used too much tuberculin—perhaps we are now not using enough.

Artificial pneumo-thorax or, as it should be termed "lung collapse," has come to stay. Its results in many cases have been brilliant. It is the one therapeutic measure in tuberculosis which has stood the test of time. Originated by Murphy in this country, and improved by Forlanini in Italy, and Brauer & Spengler in Germany, it is largely used today in unilateral tuberculosis of a progressive type. The principle behind pulmonary collapse is sound and for that reason our therapeutic result is definite. It puts a splint upon a diseased lung, thus inhibiting the latter from pouring toxins into the system, and in this way reduces temperature and night sweats. By direct pressure it often inhibits cough. By alleviating symptoms, the patient is placed in a condition so that other methods will help build up his resistance. In other words, artificial pneumo-thorax treats a broken lung on the same principle that a splint treats a broken leg. The method should be reserved for patients with unilateral lesions, or slight involvement in the other lung, and where a definite period of trial with hygienic and dietetic therapy shows no result.

Collapse therapy often fails of success on account of dense adhesions. For this group we are now attempting partial collapse by admitting 50 to 150 cc. of gas at intervals of one week or oftener. In this way, small areas are compressed, with cessation of symptoms in some cases. In this country the puncture method of Forlanini, rather than the cutting method of Brauer, is universally employed. The method is not without risk. Although since 1912 I have performed over 2500 original compressions and fillings without any but the usual complications, such as effusions, skin emphysema, slight hemorrhage and one bronchial fistula which subsequently healed, there has been one more serious complication.

In the case mentioned, the patient, a young lady, had left the sanatorium after seven months, with disappearance of all symptoms. She returned weekly for a filling of 300 to 400 cc.; during the last of these, the trocar snapped within a half-inch of the hilt, leaving one and a half inches in the thoracic cavity (demonstration of plate showing trocar). After consulting with surgeons, we decided not to attempt removal of the trocar. The last X-ray picture shows diminution in the shadow of the trocar, which means that it is imbedded in the lower end of the thoracic cavity. The patient suffers no ill effect except her own mental disturbance. I quote this instance to prove that with the best technique, artificial pneumo-thorax has a percentage of risk, and that the accident reported above, although unique, may happen occasionally.

Thorocoplasty or lung collapse by removal of all the ribs on the affected side is being recommended. Eloesser has reported five cases success-

fully operated. This method is drastic, but strange to say, if properly executed, not deforming. It should be reserved for those cases where artificial pneumo-thorax is not applicable, and only after the patient is made fully cognizant of what the procedure may do to him.

Heliotherapy has been used with great success by Rollier in Switzerland for joint and gland tuberculosis, especially in children. The method consists of gradually exposing each part of the body to sunlight, beginning with a few minutes daily, until the patient lies naked in the sun for several hours each day. I have had splendid results with this method in stubborn and recurrent gland tuberculosis and shoulder and knee sinuses. We are now trying direct sunlight on rectal fistulae and ulcerations. Where heliotherapy has not succeeded, the failure may be due to faulty technique. It must be carried out gradually over months or years, and the entire body must be exposed until complete pigmentation is achieved. For laryngeal tuberculosis we use a magnesium laryngoscope invented by Frank Verba of Colorado Springs, teaching the patient to direct the sunlight into his larynx. I have recently reported seven cases treated with this method. Even in advanced laryngitis, where arrest is not possible, we get alleviation of pain, thus permitting the patient to swallow comfortably and to take nourishment. Heliotherapy is contra-indicated in pulmonary tuberculosis except in beginning cases.

Hygienic and dietetic treatment is our original, best and most dependable method. It consists of rest, fresh air, good food, sunshine and proper medical advice, under proper conditions. This sounds like a simple program, but is often carried out with great difficulty. Rest means absolute rest in bed until symptoms have become quiet. Here we often meet strong opposition on the part of the patient, who naturally chafes under restraint. We must then study our patient's psychology, or as is popularly termed today, use psychoanalysis, tell him all about himself, what we are trying to accomplish, and make him a willing and enthusiastic partner in the business of getting well, rather than a rebellious patient taking orders. We often hear the family, patient, and physician ask, "Why can't so simple a procedure be carried out at home?" Why must the patient go to a sanitarium? Home treatment of tuberculosis is comparable to learning engineering in a correspondence school. At home the system must be brought to the patient; at the sanitarium he becomes part and parcel of the system. Every case of tuberculosis except the hopeless and temperamentally unfit should spend a shorter or longer period of time at some well-directed sanitarium, in order to learn the meaning of tuberculosis and how to care for himself and protect his family and neighbors from infection. He should also learn how to prevent relapse after an arrest is once accomplished.

Unfortunately, the treatment of tuberculosis is expensive and many cannot afford to go to private institutions, and will not go to public ones. The scope of this paper will not permit of economic and sociologic discussion of how to provide care

for the man of modest means in the founding of semi-endowed institutions, which could take patients for a moderate fee, such as Trideau's at Saranac and Barlow's in Los Angeles.

In the important question of feeding we have come to realize that overfeeding in unnecessary and injurious—that proper feeding means giving the patient all he can comfortably assimilate and sufficient to restore his weight to normal. We must individualize with food as well as medicine. The patient's peculiarities must be considered. He should not be forced to eat food he doesn't like or want. Some patients cannot tolerate large quantities of milk and eggs, and this intolerance should be respected. Often the success of treatment stands or falls upon getting a patient to eat. The word "individualization" has come to mean the keystone in tuberculosis therapy, but its uses in the fuller sense are not universally employed. The fundamental principles underlying our treatment are the same for every patient. Their application, however, must be changed to meet the peculiarities and needs of the individual.

I have tried to as briefly as possible review our present known methods for treating tuberculosis. To go into detail on any one of these would require a paper on each. Have I sounded a pessimistic note? If so, it is not because I am personally pessimistic regarding the treatment of pulmonary tuberculosis, but rather that I desire to utter a word of warning against unreliable cures and to plead for the support of proven and tried methods.

If 80 per cent of all beginning cases of tuberculosis can get well, why does the attendance at sanatoria show 50 per cent and over of advanced cases? Why do we get undiagnosed tuberculosis? Surely, with the diagnostic means at our command, particularly the X-ray, every educated physician can make an early diagnosis of tuberculosis. When the diagnosis is made, the patient should be frankly and honestly informed and then given an opportunity to get well. Treatment may be started at home, if considered advisable, but if the patient does not improve something else should be done before his condition becomes advanced and hopeless. In spite of any and all methods of treatment, if the patient's natural resistance cannot be increased he will not get well.

CONCLUSIONS

1. The successful treatment of pulmonary tuberculosis depends upon building up the patient's natural resistance, as well as individualization and a study of the patient's psychology.
2. Time being the essence in treatment, early recognition of the disease, and the immediate resort to well established and proven methods, such as rest, fresh air, sunshine, good food, and proper medical advice is most important.
3. All good methods of treatment have a place in selected cases.
4. Whether the cure of tuberculosis will be discovered through bacteriology, serology or chemotherapy, the future alone can tell, but at present we possess absolutely no specific.

THE INDICATIONS FOR AND THE RESULTS OF ANCHORING HEAD OF COLON*

By O. O. WITHERBEE, M. D., Los Angeles

Having frequently observed a severe and often excruciating type of headache in patients afflicted by lowering and distention of the head of the colon, I endeavored several years ago to determine if this deformity were responsible, in part at least, for the suffering of such individuals.

Pictures following the barium meal in these patients would in many cases show not only a filling defect, but an abnormal retention period extending from thirty-six to seventy-two hours, and even longer, in certain patients who suffered more severely and over a longer period of time. In some the headaches were of daily occurrence, while others would experience them only every third or fourth day, or perhaps once a week. The longer the interval between the attacks, the more severe the onset and the greater the mental and physical depression after the spell had worn off. These seizures were frequently of a semi-epileptiform character and often left the patient in much the same condition as that following such paroxysms.

Careful study of the development of the colon, both before and after its rotation, is interesting and gives a better understanding of the resulting deformities following the advent of adhesions, kinking and distention, which in sequence follow faulty digestion, partial obstruction, and inflammatory processes. The cecum varies in shape, but, according to Trevis, in man it may be classified under one of four types. In early fetal life it is short, conical, and broad at the base, with its apex turned upward and medialward toward the ileocolic junction. It then resembles the cecum of some monkeys, e. g., Mangabey monkey. As the fetus grows, the cecum increases in length more than in breadth so that it forms a longer tube than in the primitive form and without the broad base, but with the same inclination of the apex toward the ileocolic junction. This form is seen in other monkeys, e. g., the spider monkey. As development goes on, the lower part of the tube ceases to grow and the upper part becomes greatly increased, so that at birth there is a narrow tube, the vermiform process, hanging from a conical projection, the cecum. This is the infantile form, and as it persists throughout life in about 2 per cent of cases, it is regarded by Trevis as the first of his four types of human ceca. The cecum is conical and the appendix rises from its apex. The three longitudinal bands start from the appendix and are equidistant from each other.

In the second type, the conical cecum has become quadrate by the growing out of a sacculæ on either side of the anterior longitudinal band; these sacculæ are of equal size, and the appendix rises from between them, instead of from the apex of a cone. This type is found in about 3 per cent of cases. The third type is the normal type of man. Here the two sacculæ, which in the

second type were uniform, have grown at unequal rates—the right with greater rapidity than the left. In consequence of this, an apparently new apex has been formed by the growing downward of the right sacculæ, and the original apex, with the appendix attached, is pushed over to the left toward the ileocolic junction. The three longitudinal bands still start from the base of the vermiform process, but they are now no longer equidistant from each other, because the right sacculæ has grown between the anterior and posteriolateral bands, pushing them over to the left. This type occurs in about 90 per cent of cases. The fourth type is merely an exaggerated condition of the third; the right sacculæ is still larger, and at the same time the left sacculæ has become atrophied, so that the original apex of the cecum, with the vermiform process, is close to the ileocolic junction, and the anterior band courses medialward to the same situation. This type is present in about 4 per cent of cases.

Now it can be readily seen that the original conical apex of the colon marking the termination of the three longitudinal bands having been drawn medialward gives the cecum a hook shape and especially when we consider the absence of any restraining bands on its lateral surface. The greater the distention of the outer sacculæ the greater the tendency to curl toward the median line until a well defined angulation occurs at the termination of the longitudinal bands which have been crowded inward by the distention. As a result of this angulation and the partial obstruction it affords, a pouch is formed, the emptying of which is thus mechanically interfered with, and to a certain extent, also by a reverse peristalsis common to this portion of the bowel. Had the fetal cecum continued to develop in uniform size to the tip of the appendix no such deformity would have resulted and the toxicity incident to retention would have been avoided. However, local deformity should not always be regarded as the only cause of obstruction in this portion of the bowel. A careful study of the entire colon is necessary.

Case discusses colonic peristalsis under normal and pathological conditions and calls attention to the diagnostic and operative errors which may occur if the changing appearance of the colonic shadow during peristalsis is not known. Particular emphasis is laid upon the prolonged stay of food residue in the cecum and proximal colon, and the resulting pain in the right side suggesting appendiceal involvement, which in reality may be due to some obstructing organic or functional lesion in the distal colon or rectum. The motor function he considers of greater significance than the morphological factor.

Peck, in reporting 138 cases of obstructive lesions of the colon and ileocecal region, exclusive of the sigmoid and rectum, classified them as follows: Of 103 non-malignant cases he found 26 due to post-operative conditions; post-inflammatory and congenital bands and adhesions, 58; diverticulitis, 8; tuberculosis of cecum or colon, 8; mega colon, 3. There were 35 cases of obstruction due to carcinoma. The obstruction occurred in the cecum, in

* Read before the General Surgery Section of the State Medical Society, Yosemite, May 17, 1922.

3; in the ascending colon and hepatic flexure, 12; in the transverse colon, 3; in the descending colon and splenic flexure, 5; and in the sigmoid, 12. In the post-operative cases omental and peritoneal bands and adhesions were the usual offenders. In some of these the condition was remedied only with much difficulty, while in others it was easily relieved. Peck warns against sweeping iodine from the skin into the peritoneal cavity and rinsing the hands in bi-chloride solution before introducing them into the abdomen. The typical Jackson's membrane he found to consist of short, tense peritoneal bands which usually were attached to the ascending colon at its anterior longitudinal band, so that they fixed and constricted the gut to a varying degree, and rotated it to the right on its long axis, often from 60 to 90 degrees.

The intoxication resulting from the colon retention is both local and general. The local effect is upon the nerve endings in the wall of the bowel. Here we have the plexus of Auerbach situated within the muscle wall, and the plexus of Meissner situated beneath the mucus membrane. Intoxication of these and the nerve filaments derived from them interferes with both efferent and afferent impulses necessary for reflex action, and we have as a result another example of the "Vicious Circle": lessened mobility, longer retention; longer retention, greater intoxication; greater intoxication, lessened mobility. The evil systemic results following this condition, especially where the entire colon is involved, can be readily appreciated. The immediate disturbance of liver function and the secondary central and peripheral changes are too well understood to warrant discussion.

Adhesions must be separated and all fibrous bands which in any way have to do with angulation or kinking must be cut in order that the colon may be liberated and allowed to lie without restraint, and in contact with the parietal peritoneum in the right flank. Here it is secured by a running suture uniting the lateral longitudinal band to a fold of the peritoneum for a distance of from 5 to 6 inches, taking care to so complete the work that no channel is left between the new line of attachment and the mesa colon through which a hernia might develop.

I first ventured to undertake the procedure nine years ago at the close of an abdominal operation for some pelvic trouble, and the removal of the appendix. The patient had suffered the most excruciating periodic headaches I have ever observed. She was for some time in the care of the late Dr. Elbert Wing, who studied her case carefully from the neuropathic standpoint, but was able to do little more than secure partial relief from sedative treatment. Following the straightening and anchoring of her colon the headaches were very much improved, and as time went on they grew less and less noticeable and finally ceased. I have now done the operation 28 times, but never as a separate procedure. In connection with other work I have anchored the head of the colon in such patients as have suffered the character of headaches described.

(1023 Pacific Mutual Building.)

THE PHYSIOLOGICAL EFFECTS OF NITROUS OXIDE*

By NEIL C. TREW, M. D., Los Angeles

This paper is the result of an attempt to straighten out in my own mind the physiological effects of N_2O . It is a subject of fundamental importance. If we do not have a clear knowledge of the action of the drug we employ we are on the same footing as the lay anesthetist. If we do not know whether the spasticity of the muscles in a given case is due to lack of O or an excess of CO_2 , or to too much or too little N_2O , we must guess at the remedy to be employed, and can consider ourselves as indeed fortunate if we avoid disaster.

Although N_2O was discovered by Priestly 150 years ago, and has been used as an anesthetic for nearly eighty years, it was not until recently that anything was known of its physiological effects except that it would produce anesthesia and, if given too continuously, would lead to asphyxia and death. Long after the effects of such drugs as opium and digitalis and belladonna had been worked out minutely, the action of N_2O remained unknown, and there are still many problems to be solved and hypotheses to be verified. There are several causes to account for this delay in our knowledge of the drug; first, the fact that it is a gas and therefore more difficult to study (and a very inert gas whose presence is not easy to detect); also, that its effects are so extremely transient and are confined almost entirely to the higher nerve cells, and again that O in just the right proportions has to be administered with the gas to avoid confusion arising from asphyxial symptoms.

In any inhalation anesthesia there are the following elements to be considered: the anesthetic agent, the supply of O, the elimination of CO_2 and the N of the air. All of these enter into the problem and render it exceedingly complex, and when we add to this the fact that we are dealing with the question of consciousness (itself the most mysterious of known phenomena), and the response of the organism to traumatic stimuli, we can realize the difficulties of the problems involved. Consciousness, in some wonderful way, results from the inter-activity of an enormous number of separate brain cells, and we are to inhibit that consciousness by modifying that activity.

In all of the earlier experiments with N_2O the unfortunate mistake was made of confusing the anesthesia caused by the gas with unconsciousness, produced by asphyxia; indeed, for many years the two were considered identical. In 1890 H. C. Wood, as the result of a series of experiments, came to the conclusion that "... N_2O has no inherent anesthetic properties, but that the loss of consciousness which follows its inhalation is the result of asphyxia—that pure N acts in the same manner, that is by shutting off the O." As late as 1915, Crile stated that in N_2O and O we have two antagonistic agencies which gives us perfect control of the anesthesia—the less O the deeper

* Presented by Dr. Neil C. Trew to Pacific Coast Association of Anaesthetists, May 16, 1922.

the anesthesia, the more O the lighter the anesthesia, and even in the recent experiments of Jones and McPeck, reported in Bulletin 5 of the N. A. S., the asphyxia necessarily present from breathing pure N_2O seems to have been ignored in determining the cause of death. When N_2O is given pure the unconsciousness produced is the result of its anesthetic properties plus the attendant asphyxia, with a constant increase in the latter, the longer the anesthesia is maintained.

In 1891 van Arsdale reported experiments in which, by the use of artificial pressure, anesthesia was produced without asphyxia with a mixture of N_2O and 20 per cent O, even though the pressure was raised to only one and one-fourth atmospheres. Since it was known that men can work for hours under a pressure of several atmospheres without being anesthetized by the air they breathe, it at once became apparent that N_2O must differ from N in possessing inherent anesthetic properties. However, it was not until 1909 that Dr. Clarence Webster of Chicago demonstrated that artificial pressure was not necessary and that when combined with O, N_2O could be used for prolonged surgical operations. Following Dr. Webster's work, the use of N_2O and O as a general anesthetic spread rapidly, and clinical observations covering large series of cases were recorded, in addition to numerous experiments on animals. However, we now know that only limited credence should be placed on the conclusions arrived at because of the impurity of the gas used; it was not until 1915, as a result of work done at the Lakeside Hospital, Cleveland, that the gas was freed from dangerous impurities. Accurate clinical and experimental observations really began, then, in 1915. Even now it is probable that the untoward effects noted in some cases are due to impurities in the gas and should not be recorded as the action of N_2O .

N_2O is dissolved in the proportion of 45 volumes of the gas to 100 volumes of blood, without chemical combination, though the fact that more of the gas is dissolved in blood than in an equal quantity of water makes it probable that a certain small amount of the gas must be held in chemical combinations—probably with the lipoids. Its rapidity of action and the promptness of recovery makes it probable that its effects are produced by physical rather than by chemical means. Its effects within the body are manifested almost entirely by the inhibition of the activity of the higher nerve cells. How this is brought about is still a question. Crile speaks of a decreased permeability of the semi-permeable cell membranes, but offers no proof. Dennis E. Jackson in the Year Book, Volume 2, suggests that the absence of the supposedly inert N of the air may in some way be responsible for the anesthesia, but says, "It is, unfortunately, extremely difficult to prove this point." It seems to me very easy to disprove it. If a patient is anesthetized with pure O and N_2O and is kept under for a sufficient time to eliminate practically all the N, and if then the O supply is increased sufficiently without admitting any N, the patient will come out from the anesthetic.

The most commonly accepted theory is that in some way the drug leads to a sub-oxygenation of the body cells. This sub-oxygenation is not sufficient to affect most of the body cells, but is enough to inhibit the activity of the higher nerve cells. It is interesting, in this connection, to recall a series of experiments carried out by Crile some years ago to determine the effects on the different tissues of extreme exsanguination. He found that the higher nerve centers—those latest acquired—were the most sensitive and the first to succumb, and it has occurred to me that herein may lie the explanation of the selective action of N_2O . In all the cells of the body there may be a slight interference with normal oxygenation, but the effect of it may be apparent only in the higher nerve cells, which are particularly sensitive to such influence. In support of this theory are the findings of Davis, who studied the effects of long continued anesthetics on pregnant animals, that "The changes following the use of N_2O being identical with those seen after ordinary asphyxiation, it seems fair to believe them due to long continued interference with cell oxidation."

As N_2O exerts its principal effects upon the nervous system, we will consider that, first—

One of the most common comparisons is between anesthesia and natural sleep. Crile and numerous others have called attention to the similarity of the two states—both may occur in varying degree; in both consciousness is lost, and in both dreams may occur, but the similarity is more apparent than real, and there exists this very important distinction—under anesthesia, and particularly under N_2O anesthesia, a state of analgesia exists, which is not present in natural sleep. This is a point worth considering carefully, for it is one which I think has been overlooked. Our Year Book is called the American Year Book of Anesthesia and Analgesia, but we have been wont to consider the two conditions as separate and as not existing together. In sleep, though the perception of pain may be dulled to a certain extent, no true analgesia occurs; in fact, it is most important for the protection of the individual that it should not occur, otherwise the sleep in which we spend about a third of our lives would expose us to grave dangers. We have all had the experience of being awakened from profound sleep by pain. When worn out one may sleep in spite of pain, but a certain subconsciousness of the pain is ever present.

With most of our anesthetics, and particularly with N_2O , a state of analgesia without loss of consciousness may be produced. Patients coming out from the effects of N_2O after a painful operation are conscious for some appreciable time before they show signs or complain of pain. The conscious maintenance of analgesia during prolonged and painful dental work has been frequently reported, and we all use this state in the management of labor cases. As stated in the Monogram on N_2O Analgesia and Anesthesia in Normal Labor and Operative Obstetrics, "The operator has equally at his command the analgesic state in which the patient is conscious but relieved of pain,

and profound narcosis, when every sense is stilled in lethean forgetfulness; and either stage can be prolonged indefinitely, or readily transferred into the other without untoward complications."

Now, if we are able to produce analgesia without loss of consciousness, it is reasonable to believe that when consciousness is lost under a more powerful action of the drug, the analgesia still persists. In other words, when we produce anesthesia in a patient, we also produce analgesia.

The analgesia is not absolute, as is shown by certain responses to painful stimuli, notably muscle rigidity, but when we remember that the inhibitory centers are depressed and think also how many children and some adults thresh around in their sleep in response to comparatively light stimuli, we can understand how there may be some response to trauma under N_2O without any stimuli sufficient to produce shock reaching the brain. In this connection we may note that the means which we employ to overcome these responses to pain are not directed toward a deepening of the unconsciousness, but to a greater analgesia. We use morphine as a pre-medicant; now, morphine in itself is not a hypnotic, but dulls pain; or we add a certain amount of ether vapor to our gas mixture. Now, in using ether for this purpose one is always surprised at the very small amount necessary to produce relaxation—the amount is so small, indeed, that one suspects that it is the analgesic rather than the anesthetic effect which is needed.

The importance of these considerations in relation to shock production is apparent.

The effects of N_2O upon the nervous system are very quickly recovered from and no ill effects have been noted from prolonged or frequent administrations. Crile found that the brain cells of rabbits suffering from prolonged lack of sleep recovered just as quickly under N_2O anesthesia as under natural sleep, and the gas has been used as a therapeutic agent in long continued nervous cases with apparent good results.

Turning now to the general systemic effects, let us consider first the effect on blood pressure. Mistakes in observation die hard in medicine, and one of the most tenacious of these is the idea that N_2O raises blood pressure. Asphyxia does raise the pressure and, because of the confusion already alluded to between asphyxia and N_2O anesthesia, this mistake has been handed down from one medical writer to another. Castro (1917) and Spencer and Davis (1919) all found that no rise in blood pressure occurs unless there is cyanosis, rigidity or jactitations, and that no rise was present if sufficient O was admitted to prevent these symptoms. Of course, there is always the *possibility* of a rise in blood pressure, for we are dealing with two gases, one of which has an asphyxiating effect, but none should occur if anoxemia is avoided. As one would naturally expect, the effects upon the heart itself are less than under ether or chloroform. As McCurdy says, "As regard to effects upon the heart muscle and its nervous mechanism, N_2O is indisputably the least

injurious. Heart complications are conspicuous by their absence."

As to the blood itself, all anesthetics tend to reduce the haemoglobin but, as stated in the National Anesthetic Research Society's monograph on N_2O in labor, under N_2O and O anesthesia, the reduction is only slight, but the return to normal occurs in from two to three hours. There is also a decrease of blood catalase, but this also is much less than under chloroform and less than under ether in operations lasting more than forty-five minutes. The alkali reserve is also less interfered with under N_2O . The effects upon the liver cells have been recently studied by Charles la Roque of Montreal, who finds that " N_2O used on patients requiring no surgical intervention produces no cholemia and is the only general anesthetic which does not injure the hepatic cell." Upon respiration N_2O exerts at first a stimulating effect so that under ordinary anesthesia the respirations are from twenty-eight to thirty-two per minute, but under deep narcosis the respiratory center is depressed. If death occurs from N_2O poisoning, it is through respiratory failure. There is a greater variation in susceptibility to N_2O than to other anesthetics, and I think it safe to say that with pure N_2O and pure O given properly, one never gets an overaction of N_2O in normal patients. That is, if death occurs, it results from using an impure N_2O or from some abnormality of the patient.

Muscular relaxation is brought about through the action of the drug upon the nervous supply, for a muscle cannot be paralyzed with N_2O as with ether and chloroform. Through its action on the nervous system a relaxation slightly greater than during normal sleep is produced, but absolute relaxation cannot safely be attained without the preliminary use of morphine, and even then not in all cases. A good working relaxation is produced in the great majority of cases, but if the surgeon demands more than this, then recourse should be had to small amounts of ether vapor rather than attempts to force the action of the N_2O . Secondary saturation seems to be satisfactory in the hands of its originator, but few of us would feel justified in using it as a routine measure. Muscular rigidity and spasm is a sign of O starvation and cannot be overcome by an increased concentration of N_2O without approaching the danger line of asphyxia.

To sum up briefly, N_2O is the best anesthetic we have at present from the patient's point of view, for it is the least toxic and affords the best protection from shock through its analgesic action.

Advertising Methods—The chiropractors are using full-page illustrated advertisements to attract patients, but then that is no worse than what is done by certain supposedly ethical members of the regular medical profession who take up full pages in the photogravure sections of lay publications, or several pages in popular magazines. The chiropractors also are making use of some wonderful signs illuminated by varicolored electric lights, and in some places occupying almost the entire front of a building. Surely, the members of the regular medical profession who are bent upon placing themselves before the public by means of advertising are not going to let the chiropractors get the best of them.

FACTORS IN THE CONTINUED DEVELOPMENT OF THE PHYSICIAN *

By LOUIS B. WILSON, M. D., Rochester, Minnesota

A hundred years ago we were a nation of pioneers. Preparatory schools, such as high schools, were scarce. There were but few colleges. Men with schooling beyond the rudiments were rare. Nevertheless, in reviewing carefully the history of the leading men of that day, one is impressed by the fact that though without schooling many of them were scholars; without formal training they were educated; with few books and in primitive environment yet they were cultured, they possessed high character, they were loyal citizens. Their informal education began early, there was no great break in it, and it was continuous throughout their lives. They did not graduate from college and then cease the attainment of wisdom; they continued to grow to the full stature of men.

The leaders of the present generation in all the professions and to a great extent in business are men from schools and colleges. They have had formal training in grade and high schools, in colleges, universities and professional schools. They have graduated, not once but several times. But at their last graduation many of them have apparently put aside once for all, all attempts at further progress in scholarship, in education, in culture. Thereafter they have been interested only in the art and emoluments of their occupation. Their formal training has been long and thorough, much longer and more thorough than that of their forefathers, but many of them have apparently "broken training" permanently at their last college commencement.

Of all professions that of the medical profession today requires the most prolonged formal schooling. The medical student has a course of study definitely laid out for him for a period of a minimum of seven years. This course of study in the college is filled to overflowing with the requirements in physics, chemistry and biology; with a smattering of the humanities. In the medical school the first two years are a desperate struggle to become familiar with the rudiments of at least six new sciences, and the last two years a wild scramble to obtain a general knowledge of the art of medicine by patching together the teachings of a cloud of specialists. Much of the intern year must be spent in becoming proficient in the mechanics of diagnosis and treatment of disease. Taken as a whole it is the common experience of the student who has come into medicine from other fields of science that never before has he been so crowded with work as he is in his medical course. The heavily weighted curriculum allows little time for thought in any field other than the prescribed ones, and too often, it is feared, little time for careful thinking even in medical fields.

Now, is all this high pressure schooling tending to make scholars who continue to progress, or is there a tendency to surfeit the present day medical student with too heavy requirements and too

much cramming, too much routine reciting, too little thinking, so that when he does finally obtain his degree he thereafter looks upon his education as an accomplished fact and ceases to grow?

It is a characteristic of one's advancing age that he should contrast the present to its disadvantage with the past. Yet, even allowing a wide margin for this trait, it seems to me that many of the highly educated young medical men with whom I am now thrown in contact do not have the same gift of continuance of those of an older day. They seem to have become blasé to book learning. They seem to have lost the power to study intensively, even in the field of medicine. Is it possible that in our present method of medical teaching by specialists alone, each of whom attempts to crowd the whole of his special knowledge into the heads of all of his students, that we are sickening our men of a desire to learn; or is it possible that we are developing in them a feeling that they know it all since all that is known in each field of medicine at least has been poured over them? Are we sacrificing enthusiasm, spontaneity, power of personal endeavor, in our students to our desire as instructors to tell all we know? Is it possible that our excellent standards of medical education, as set forth in entrance and exit requirements, in examinations by faculties, state licensing boards and the National Board of Medical Examiners, is developing in the younger members of the medical profession a feeling that, having passed all of these requirements, nothing more is necessary; that there is nothing more to learn; that there is no need for continued development?

If such results even suggest themselves it is perhaps worth while for us to survey the situation most carefully and see if the final outcome is not, after all, failure. Is even the perfect machine, devoid of growth, likely to last as long and do as good work as the less perfect living organism which is continually growing because alive? Do all of our entrance requirements, floods of instructions, fires of examinations, provide the best type of physician for the community, or do they tend to retard growth, to arrest development and result in doctors who fail to attain their highest possibilities as physicians, as citizens or as men? For we must be sure that our system of education encourages the individual to continue to develop not only his professional efficiency but also those qualities which make him a loyal and valuable citizen, those elements of culture which "make him fit company for himself" and those refinements of character which make him a gentleman.

As far as the continuation of the professional development of the physician is concerned, it would appear that there is an excellent spirit abroad. It is the accepted procedure for the medical man to continue to inform himself by a multiplicity of medical journals, by frequent meetings of medical societies, by visits to other physicians and medical centers, and by graduate courses in medical schools, some of which latter are thorough and many of which are stimulating. If any criticism may be made of all these most excellent procedures it is

* Address before the Southern California Medical Society, Los Angeles, November 4, 1922.

that they are too often considered as a thing apart from the daily practice and the daily life of the physician. They are likely to be taken in spurts and to lack relation to the individual patient. Mrs. Jones' ailment is diagnosed and she is treated on the basis of knowledge long since attained. The detail "boning" study of her individual case is not made. A superficial examination, an incomplete diagnosis, a semi-effectual treatment are sufficient to enable the physician to "get by" with her case, because so large a percentage of patients recover with no diagnosis or treatment or with as incorrect diagnosis and mistreatment as that rendered by practitioners of the various cults.

It is surprising how many physicians seem to have lost the power of serious study within five years after leaving medical school. In our experience with applicants for fellowships in the Mayo Foundation we have been particularly impressed by the large number of men, graduates of good schools, who have been out in practice five or more years, and who seem not only to have failed to keep in touch with the progress of medicine made during that period but also to have lost their ability to study efficiently and to grasp thoroughly new situations in medicine. They appear to have become routinists and in endeavoring to keep up with the "practical" art of medicine have lost the power to appreciate the theory of medicine, by which alone they may advance themselves in the science of medicine. This is especially true, of course, of men in relatively isolated communities who have not had daily attrition with their professional brothers. We have come to hesitate seriously about taking on for special training, however insistent he may be, a man who has been five years or more in relatively solitary general practice.

Again we are led to contrast in this respect the men of the present with those of the past, who seem to have retained until late in life the power to study intensively abstruse problems. Is real intellect less common than it was in pioneer days or do we know only of the greater intellects of those days? Is the cramming system of our schools of today deadening in its effect on native intellect or are there too many things of routine character to be done to allow the physician time for really intellectual study of his profession? Did the meagerness of outside interests of the pioneer allow him to concentrate better on the main things of life? Do the diversified amusements of today make more difficult sober thought? Does the very multiplicity of medical society meetings, the fashionableness of clinical trips, the popularity of short post-graduate courses, all offered as pleasant substitutes for the burning of midnight oil, seem to make unnecessary the habit of intensive personal reading and experimentation?

Please do not misunderstand me. I would not for a moment decry the use of any of these substitute forms of study. They are of very great importance. But I cannot help feeling that many of the half-ripe papers read before our medical societies, the brief and too frequently unthoughtful discussions of the same, the long range ob-

servations of surgical operations in popular clinics, and the hastily engorged courses in quick-lunch-counter schools, while infinitely better than merely doing the day's work for the day's pay, are yet expensive and greatly overrated substitutes for regular and serious personal study and investigation. With the present abundance of text-books and treatises in almost every field of medicine and their ready availability, if not by purchase then through libraries, with the great freedom for experimentation which may be enjoyed at little expense by any earnest physician, there is no excuse for any physician not keeping alive his scientific knowledge and his ability to study intensively in his profession. The stock argument that there is no time has no validity. There is time if we will take it though it may reduce our golf, our motoring or even our hunting. I therefore plead for the good old-fashioned accomplishment of reading, for "Reading maketh a full man," and for the practice of experimentation, for "Experiment maketh the accurate man."

But it is not alone in the continuation of the development of the physician professionally to which I wish to invite your attention this evening. It is rather those phases of his development which are even more likely to be neglected than his professional side that I wish to discuss briefly.

Is the physician of today a good citizen? In the sense that he usually keeps out of jail and the alms house—yes. In the sense that he usually pays his debts, lives peaceably with his neighbors and does not make himself a nuisance in the community—yes. In the sense that he is ready to give freely of his means to charity, to pay his taxes promptly, though it may be a bit grudgingly, and to serve his country willingly in time of war—yes. But, in the sense that he takes little interest in the public health of his community, in medical legislation, in County, State or National politics—no. In these respects he does not live up to his capabilities, his opportunities, or his obligations.

We talk a great deal as a profession about the hold that the members of certain medical cults are obtaining in the communities in which they live. We deplore the fact that in many places they are becoming health officers and members of county boards and of state legislatures. Yet, as physicians we are prone to neglect these positions ourselves and to leave them to those members of our profession who cannot make a living in their profession or to the members of the cults. We are inclined to regard the occasional enthusiastic young physician who goes in for public health work as an incompetent or a crank and to fail to support him either by our interest or our co-operation. When a young physician asks our advice about public health as a career we tell him to go into surgery.

The teaching of public health in our medical schools is almost everywhere a farce. Despite this bad teaching, however, many men with years of experience in infectious diseases, for example, come to have very excellent judgment which should be placed at the disposition of the community in

public health affairs. But too often they simply stand aloof and criticize. If they do not feel that they are competent to take charge of public health work themselves, they might be of great assistance by furthering the appointment of and then giving their fullest support to the most competent young man who can be induced to take the position of Health Officer.

Why do we not have better men holding the position of County Coroner? Because better men do not seek it. This position should be held by physicians with good judgment and keen investigative ability. The punishment of crime in our country is so lax that criminals multiply. Many of the failures of justice in homicide may be traced directly to the stupidity of the coroner or his assistant in not discovering the essential facts.

There is almost as great necessity for physicians to take part in community and state affairs, not primarily related to their profession, as in those principally concerned therewith. The most schooled citizen of the community is all too seldom on the school board. The real estate agent, the coal dealer, the banker are there because they are, forsooth, business men and are presumed to save the taxpayers' money. But the health of the school children is seldom considered officially by the citizens who should know most about it, and educational policies of school men receive no authoritative constructive criticism from physicians who should be most fitted to so criticize.

Rarely do physicians of sound judgment seek election to state legislatures. Or if they do, it is in a half-hearted manner and without adequate support from the other members of their own profession. As a result we have the spectacle yearly of state legislatures perpetrating the most asinine legislation in relation to health, to medical licensure and to education. In the meantime the legislative committee of state medical societies in their reports annually deplore the legislative actions taken and express futile hopes for improvement in the future. The way for physicians to get for the community sane health, licensure, and educational legislation is to take a hand directly in its making. Unfortunately, getting elected to do this is not so easy for the physician. He has so long and so assiduously cultivated the narrow view that his duty is solely to the patient, that the patient when turned voter is apt to regard the doctor as his personal attendant only and without knowledge or experience beyond that function. The physician of today in large measure has lost his reputation in the community for broad experience and ripe judgment in matters other than medicine.

If we had in the halls of Congress more broad-gauge physicians, men who had previously proved their public worth in narrower civic fields, would we have so much stupidity, stalling and gallery play as now exists there? For it is fair to assume that the physician's training both in and after school fits him to accurately and dispassionately analyse data, draw logical conclusions therefrom, and make reliable estimates of probable future consequences. Certainly in all matters involving

natural phenomena, including psychological, his observation and judgment should be the equal of if not superior to that of any man of any other profession or calling.

But so long as physicians foster the fiction that their sole duty is caring for the sick, so long will they take them at their word and concede to them no measure of public worth either in small or large affairs of state. I would urge, therefore, physicians to be not less faithful in their duties as physicians but also to be much more faithful in their studies as citizens since they owe it to themselves, to their profession and to the community.

In the west we are apt to associate culture with Boston and unless we know Bostonians we are apt to think of them as weak, ladylike, effeminate, absent-minded, conventional, impractical and un-resourceful. No doubt these terms all apply properly to some Bostonians, but the cultured Bostonians and the really cultured man everywhere is exactly the opposite to what is implied in these terms. He is strong, manly, virile, clear-headed, free-mannered, companionable, gentlemanly, broadminded, intensely practical and most resourceful. Real culture implies not only a knowledge of the forces of nature and the ways in which they act, a knowledge of the ways in which men have thought and acted in the past, a philosophy which discerns the worthwhile things of life, and judgment that accurately appraises men and their manners; but it also implies that the individual enters into life in the fullest and broadest sense and does not merely sit by as a spectator.

In these days of crowded medical curriculums there is little time therein for other than scientific subjects, and while they themselves may be definitely cultural in their trend, the hurried method of their presentation, it is feared, robs them of most of their cultural value. There is no doubt that we are losing much of culture in our medical schooling by our neglect of the study of languages. The lack of command even of English by many of our present medical graduates is a serious handicap to their cultural progress. Without power of accurate expression how can they grow in habits of accurate thought? And without accuracy of thought how can intellectual development proceed?

But even though the schools were the centers for the roots of culture, we have no right to expect their graduates to possess more than the beginnings of culture. It takes the entire growing stage of a lifetime, not the few years to adolescence and early manhood, to develop the cultured man. The schools can at best only start the process, the individual continues in his development or is arrested therein solely through his own efforts after leaving school. His continued development will depend largely upon his mental environment, his companionship in men and books. If these are crude and commonplace he remains crude and commonplace; if they are intellectual and elevating he becomes more intellectual and more elevated. Let us not err, however, in supposing that all opportunities for culture reside in the schools or the cities.

Few places are so barren that either in nature or in men there is not some inspiration toward better things. It not infrequently happens that the poor and lowly recall to us Thomas à Kempis. Many a man walks blindly through life in an environment much richer than Gilbert White's "Selborne," though White found therein not only the inspiration for his own soul's growth, but for that of generations since; and, of course, books one may always have anywhere. Again we are reminded of the apparent paradox that our forefathers, with so little schooling so often were cultured men, while we of today, with so much schooling, so rarely attain culture.

Is it possible for the physician to be successful professionally, to be on the surface a good citizen, and to have the appearance of culture and yet be without character? Yes. Of course, it is difficult to conceive that the really honest practitioner, the really thoughtful student, who takes a live interest in his community and in his State and who steadfastly seeks knowledge may still be without integrity, yet there is at least sufficient of a margin of such possibility to warrant our speaking specifically of the necessity for every man giving thought to this side of his nature as well as to those already mentioned. I do not mean that the physician shall necessarily be noted in the community for his attendance at church or Sunday school or prayer meeting. I do not mean that he shall in any way seek ostensibly a reputation for integrity. Rather do I mean that fundamentally he shall cultivate a conscience which shall constantly hold up to him the mirror of his own wrongdoings, that he shall know himself for the rascal that he is, that he shall continue even as he grows older and more worldly successful to smart under the whisperings of this still small voice which tells him of his failures, of his weaknesses, of his paltry dishonesties.

We cannot all, like kings of old, have fools in our retinue to tell us the truth about ourselves, but we can cultivate our common sense of right and wrong which, as the voice of conscience, will keep us from being fools ourselves. Without this corrective, even the best of men become puffed up with egotism and think that the world trembles as they walk, seem to lose hold of their sense of proportion and to forget that even the best of men are far from perfect. In this connection I should like to recommend for the physician the very old-fashioned custom of reading Marcus Aurelius, Plato and the Christian Bible. The latter, though it contains many things which the modern scientific man may hesitate to accept, still conveys in the keenest and finest literary language a conception of character which for two thousand years has been the most potent force in developing in Christian nations those attributes which we have come to designate as Christian character: in other words, the gentlemen of the white race.

The foregoing is a rather elaborate program to be sketched as desirable in the continued development of the physician. It means serious work, but then, life is a serious matter. The alternative

is drifting or degeneracy. The American medical graduate of the last ten years has become on the face of it the most schooled man of his age. He should be not only the most scholarly, but he should come to stand in his community for the highest citizenship, the broadest culture, and the most noble character. If he does not seek in his daily life, professionally, intellectually, and morally to develop himself to the highest level to which he is capable of attaining, he is betraying the trust of the State which has expended on his early training thousands of dollars more than he or his parents have ever paid into school treasuries. If he seeks to "get by" with superficial diagnoses, with irrational and unnecessary treatment of his patients; if he neglects his duties toward the public health of the community; if he neglects his opportunities as a voter, as a public administrator, as a legislator; if he devotes his leisure to the things of the flesh only; if he does not broaden his intellect by broader knowledge and broader culture; if he does not constantly key up his character by a keen conscience; if he loses in integrity; if he fails to measure up in any of these things to the fullest measure of a man, he is by just so much a failure and cannot help in some degree in bringing shame and dishonor on what should be the most serviceable, the most scholarly, the most cultured and the most honorable profession, medicine.

An Experimental Study of Ureteroduodenostomy

—Frank Hinman and A. Elmer Belt, San Francisco (Journal A. M. A., December 2, 1922), assert that it is possible successfully to transplant a ureter into the duodenum with little if any evidence, subsequently, of infection or of back pressure, even for as long a period as 440 days. After a surgically successful ureteroduodenostomy, the kidney continues for some time to function and to excrete urine into the duodenum. When the total urinary excretion is poured into the duodenum, as after unilateral ureteroduodenostomy and opposite nephrectomy or bilateral ureteroduodenostomy, the animal dies within twelve days, with marked retention of nitrogenous substances in the blood, and symptoms identical with those following bilateral nephrectomy, except for a severe diarrhea in the terminal stages. Recovery of an animal so treated, even on the eighth or ninth day, follows ureteral transplantation from the duodenum to the skin. Uremic and other symptoms rapidly disappear, with pronounced diuresis and the return of blood nitrogen to a normal level. These facts indicate that most, if not all, of the constituents of the urine are readily reabsorbed from the intestines after successful ureteroduodenostomy. Successful unilateral ureteroduodenostomy without disturbance of the opposite kidney doubles the work of this kidney as effectively as nephrectomy, and the opposite kidney undergoes compensatory hypertrophy just as quickly and completely as it does after nephrectomy. The kidney whose ureter has been successfully transplanted to the duodenum, as it also gets double stimulation in the blood, undergoes reparatory changes in every way similar and parallel to those of its compensatory mate, and the anomalous condition of a bilateral hypertrophy will persist for several months. Eventually, in the course of from one to two years, after successful unilateral ureteroduodenostomy, the kidney pouring the products of its activity into the duodenum is found to have undergone marked, if not complete, atrophy, while its mate remains healthy and hypertrophic and continues to perform total function efficiently.

A STUDY OF THE BASAL METABOLIC RATES IN FATIGUE STATES*

By ROLAND CUMMINGS, M. D., Los Angeles

Upon observing the results of the basal metabolism studies on a large number of patients, I was impressed by the frequency of a low reading in patients who were suffering from fatigue, and especially those who were suffering from the nervous fatigue states.

I therefore reviewed the first hundred cases in our files who had a basal rate of minus 10 or below, as well as 50 consecutive cases whose readings were normal-plus 10 to minus 10.

The following table gives the number under each diagnostic heading:

	Readings Normal	Readings Below Normal
Myocarditis		1
Constipation	6	15
Chronic tonsillitis.....	6	2
Fatigue neurosis	5	30
Psychasthenia	2	8
Syphilis	1	
Hypo-ovarianism	2	2
Hypopituitarism		2
Cystic goitre	1	1
Peptic ulcer	1	1
Hypertension	9	3
Chronic arthritis	4	3
Epilepsy	1	2
Gall bladder disease.....	1	5
Fibroid uterine	1	
Tuberculosis	1	
Hypo-thyroidism	1	3
Menopause neurosis	1	8
Obesity	1	5
Endocarditis	1	
Pyelitis	1	
Hay fever	1	
Hypochondria	1	
Asthma	1	3
Goitre of adolescence.....		1
Emphysema		1
Aortic insufficiency		1
Chronic pharyngitis		1
Chronic aortitis		1
Indeterminate	1	5
	50 cases	100 cases

At that time we had fifty-eight patients belonging to the group of nervous fatigue states, in which the diagnosis of fatigue neurosis or psychasthenia, according to the classification of Dercum, were made, and upon whom basal metabolism studies had been made.

Of this group 41 or 71 per cent had a rate below normal, while 17, or 29 per cent, fell within normal limits, taking minus 10 as the lower limit of normal. It seems to me, however, that as a rule if a patient has a reading of a minus 7 or below, the actual rate is below normal, and if this was taken as the upper limit of normal 49 or 84 per cent of our 58 subjects suffering from a group of symptoms which forced us to make a diagnosis of fatigue neurosis or psychasthenia, had basal rates below normal.

To sum up the three groups, we find of those having normal readings 14 per cent belonging to this group of fatigue states; of those having readings below normal, 38 per cent fall in this group; while in a group of 58 cases of nervous fatigue states 71 per cent have readings below normal.

Because of the obscurity veiling the etiology of these troubles, this scanty deserves consideration.

At various times some physician has thought he has discovered the underlying cause of these troubles as the expressed belief of Head that the

symptoms of neurasthenia were due to a latent tuberculosis, and the advocacy of McLester that syphilis was the etiology at least in a large percentage—in his series, a positive spinal fluid being present in over 30 per cent. We cannot agree to this as the signs generally used to interpret tuberculosis were present in none of the cases, nor were any diagnoses of fatigue neurosis made in the presence of the laboratory findings or the physical indications known as being caused by syphilis.

There is no doubt but that anything producing chronic exhaustion, from a chronic infection to a train wreck, if severe enough, produces some of the symptoms of a fatigue neurosis in any one; but it appears to take a certain type of individual to so properly react to stimuli as to produce the classical picture in which marked nervous and muscular fatigue, general nervousness, more or less insomnia, bad dreams, poor memory, lack of poise, nervous tension, palpitations, clammy extremities, sensitiveness to cold, basilar headache, desire to weep or scream, band about the head, exhaustion more marked in the morning than evening, many and varied fears and an appearance of good general health, are the various colors in the picture.

The measurement of the basal metabolic rate is merely a measure of oxidation or a measuring of the amount of oxygen actually taken up by the body cells. Inasmuch as the oxygen consumption is very largely controlled by the thyroid gland, we looked for other signs of low thyroid function, e. g., dry, inelastic and pudgy skin, dead, brittle and falling hair, thin eyebrows, poor memory, slow conception, amenorrhea, etc. While these signs were more common among the group with abnormally low rates, yet they were inconstant and did not seem to bear a close relation to the basal rate. In general, however, if the skin was dry, the hair was dry and dead, the memory decidedly deficient, one could be quite certain the rate would be sub-normal.

What, then, is the cause of this condition in which suboxidation is so constant, and in what way is it related to the symptoms of which these patients complain?

Alexander and Cserna state that the brain shows a consumption of 0.360 cc. oxygen per gram minute, while voluntary muscle shows a consumption of only 0.004 cc. of oxygen per gram minute. According to these observers, a given weight of brain uses ninety times as much oxygen as an equal weight of voluntary muscle while at rest. The voluntary muscles constitute 42 per cent of the body weight, the brain but 2 to 3 per cent; yet when the body is at rest the brain consumes five times as much oxygen as all the involuntary muscles combined.

May not this then account for the small amount of energy it is possible for the nervous system to produce, as is manifested by the exhaustion, nervous irritability, lack of nervous control, the mental depression, the insomnia, and the marked lack of sympathetic nervous system poise noted in this condition? And may not this account for the

* Read before the Section on Neuropsychiatry of the Medical Society of California, Yosemite, May 16, 1922.

great necessity of absolute physical rest in patients with marked exhaustion? Again, why when oxygen can be breathed freely, apparently be taken into the blood and brought in contact with the nerve cells, cannot these cells consume this oxygen? If there was a deficiency of thyroid hormone which acts as the catalase causing the union of the oxygen and the cell, possibly in the manner that the spark causes the union of oxygen and the gas in the motor, the explanation might be found. But the other signs of thyroid deficiency are not constant; and, while thyroid therapy is undoubtedly beneficial, it does not produce the good results it should were it solely the deficient element.

Crile, in his studies on shock and exhaustion, found "cystologic changes in the suprarenals in exhaustion from any cause, including insomnia, these changes being more marked in the cortex than the medulla." He states: "Apparently epinephrin alone can cause the brain greatly to increase its work." And again he says: "We may conclude, therefore, that the adrenals are factors in the primary cycle of exhaustion though their role cannot be accurately defined." This is suggestive that the adrenals have something to do with nerve cell oxidation, as activity and oxidation are practically synonymous.

There are other evidences of a suprarenal deficiency in these fatigue states, as

1. A history of excessive mental strain of longer or shorter duration and of greater or less severity. From the knowledge we now have it is reasonable to believe there is a great drain upon these glands during a period of stress, either physical, or mental, and possibly they become chronically exhausted.

2. We know the suprarenal glands have much to do with the working of the sympathetic nervous system. If these glands were exhausted, this might explain the lack of normal function of this system as manifested by cardiac palpitation, local skin flushing, spastic type of constipation, etc.

3. The frequency with which a low blood pressure is observed in this condition.

4. Might the low basal metabolic rate apparently so common, and not satisfactorily explained by a hypothyroid state, be due to lessened adrenal function? Muirhead, studying his own condition of Addison's disease, found his rate to be minus 30. This was brought to normal by one-half cc. of 1/1000 epinephrin solution given hypodermically twice daily.

In summing up the study, there is enough evidence to convince us of a lessened consumption of oxygen. In the majority of cases of fatigue neurosis there is a suboxidation of the individual nerve cell. This disturbance of cellular metabolism may account for the irritability, lack of energy and disturbed function manifested by the various symptoms.

The cause of this disturbance is speculative but probably is due to a deficiency of some chemical element concerned in cellular nutrition, and may be the same thing concerned in shock which we might

think of as an acute exhaustion, while the disease under discussion is a chronic exhaustion.

There are various things that point to this chemical element being related to a deficiency of the thyroid, the adrenals, or both. At least there appear to be definite benefits derived from administering the thyroid hormone, whether the action is directly on the nerve cell itself or indirectly by way of a stimulation of the adrenal glands.

While Addison's disease is the only clinical entity of which we know due to a suprarenal gland disease, yet in the condition known as fatigue neurosis there are so many symptoms which could theoretically be based upon a disturbed function of this gland that it deserves further thought and observation.

(1135 Pacific Mutual Building.)

Indifferences of the Medical Profession in Legal Matters—This subject is being quite generally discussed by the medical writers throughout the United States. The New York State Medical Journal discusses the subject in the following manner:

"Is it not about time that we awake to the needs of self-defense? Each time the houses at Albany adjourn without actually declaring the practice of medicine to be a felony, the profession takes a long breath, and with a feeling similar to Micawber, on the first of the year, when he renewed his I. O. U.'s, they 'thank God that's over.'"

"The chiropractors think enough of legalizing their chicanery to pledge large sums for the furtherance of their interests—they pay the legal profession well to defend them—they appear both in person and by testimonial—they plead persecution and prosecution—they weep great salt tears on the shoulders of our lawmakers, while at the same time they are stealing the lawmaker's birthright, viz., safeguarding the public from quack and charlatan."

"It is unfortunate that the medical profession does not take on self-insurance—pay dues to medical societies sufficient to maintain proper machinery for its own protection. We pay two or three hundred dollars yearly as dues in a golf club—health insurance." The editor then goes on to compare this amount with the amount ordinarily paid by the medical man to his medical society and mentions that of some 15,000 doctors practicing in the State of New York, 5500 do not care enough about medical matters to belong to the State organization.

Doctor Lester Hollander in discussing medical organization and its profit to the doctor, in the Pennsylvania Medical Journal, summarizes the advantages of the physician affiliated with medical organizations in the following manner:

1. It assures the physician's standing in the community, before the public, the law, and the profession.

2. Organization provides access to a continuous post-graduate course.

3. Organization induces the sharing of trade secrets for the good of all.

4. Organization establishes confidence in yourself through the association with the best the medical profession has, and through the meeting and chatting with its leaders, who, by the way, make up the bulk of those attending scientific meetings.

5. Protection from malpractice suits which may arise in the practice of even the best physician is another immeasurable advantage.

6. Organization helps in the elimination of professional jealousy and piracy.

7. Another item of value is the maintenance of fees.

8. A participation in the united effort to protect the population against cults and fads can be hoped for only if the medical profession stands united, and uses collectively its tremendous individual influence for the rights of the profession.

EDITORIALS

AMERICAN MEDICAL ASSOCIATION MEETING

The American Medical Association will hold its seventy-fourth annual convention in San Francisco, June 25 to 29. Convention diagnostic clinics will be held in hospitals accredited by the Council on Medical Education and Hospitals of the A. M. A. in San Francisco and Oakland on June 24 and 25. The California State Medical Society is the host for this meeting. This is the first time that a State Society has entertained the American Medical Association.

Committees are already at work to make this meeting of the American Medical Association one of its best. In order to do this every member of the State Society must co-operate in every way possible; in particular, they should attend the meetings, arriving in San Francisco in time for the State meeting Friday morning and staying through the following week.

THE SHEPPARD-TOWNER LAW

In order that the attitude of the physicians of California toward the Sheppard-Towner law may be made clear, the following brief resume and analysis of that law has been carefully considered by the Council of the State Medical Society, unanimously approved and ordered published as an editorial in the February number of the Journal.

The Sheppard-Towner law has had more discussion and more has been written about it during the last year than almost any other subject before the people of our country, except the Volstead act. The literature about it is of all classes, from many sources, and considers the law from many angles. The unusual interest manifested in this law is because it happened to be the arrow that focused the attention of all people upon certain tendencies affecting the fundamentals of our government.

Opponents of the measure consider it to be paternalistic, bureaucratic, socialistic and political in its purposes and methods of operation, to an extent not yet attempted by any other legislation in our national government. They consider that it gives a bureau of the Labor Department at Washington authority to use the Federal taxes in an unequal and unfair manner; that it is class legislation that invades "states' rights" and interferes not only with the responsibilities and duties of the state government itself as provided in the Constitution, but that it adds another link in the chain of influences tending toward socialization of the home.

Proponents of the law deny some or all of these and numerous other accusations that are made against it. Practically all of the proponents consider accusations of whatever character made against the bill as of minor importance compared to the benefits they claim to believe the law provides in reducing mortality and morbidity incident to childbirth. It is a merry controversy, and we

are not likely to see the end of it for some years to come.

The provisions of the law have been refused by several States. Others, including California, must consider it during the present session of the legislature. A considerable number of States have complied with the provisions of the law. New York rejected the law and forestalled possible criticism, based upon a sentimental appeal of "save the mothers and babies," which every one recognizes, by passing a State law giving the State Board of Health funds and authority to investigate and relieve, as far as possible, the hazards of childbirth among all classes of people who are unable to secure these services on their own responsibility. Massachusetts rejected the law and has entered suit to test its constitutionality in the Supreme Court of the United States.

The Governor of California has recommended its acceptance, and the final position of this State must be determined by Governor Richardson and the legislature now in session.

Position of the Medical Profession

The paternalistic, bureaucratic and socialistic features of this bill overshadow its medical and public health features in much of the literature and many of the discussions. Nevertheless, it has features vitally interesting to physicians, and the physicians of the country and in Congress early called attention to the dangers of the law. The position of the medical profession has been that of opposition from the introduction of the bill to the present. This opposition has been consistent and more nearly unanimous among the physicians of the entire United States than on any other question of which we have records. The American Medical Association, acting through its House of Delegates, condemned the law in a resolution reading as follows:

"Whereas, The Sheppard-Towner law is a product of political expediency and is not in the interest of the public welfare; and

"Whereas, The Sheppard-Towner law is an imported socialistic scheme unsuited to our form of government; and

"Whereas, The Sheppard-Towner law unjustly and inequitably taxes the people of some of the States for the benefit of the people of other States for purposes which are lawful charges only upon the people of the said other States; and

"Whereas, The Sheppard-Towner law does not become operative in the various States until the States themselves have passed enabling legislation. Therefore, be it

"Resolved, That the American Medical Association disapprove the Sheppard-Towner law as a type of undesirable legislation which should be discouraged."
—(Abstract from the minutes of the seventy-third annual session of the A. M. A.)

Many other organizations of physicians have condemned it and, so far as we know, none has endorsed it. The California Medical Association, through its House of Delegates and Council, has condemned it on several occasions. The Council, in a resolution passed over a year ago, instructed the editor of the Journal to be diligent in furnishing information regarding this measure and condemning its application in California. This resolution was the Council's answer to threatening

letters to the editor telling the medical profession what would happen to their pocketbooks if they continued their opposition to this measure.

So far as the officers and representatives of the State Medical Society located in all parts of the State can find out, the only physicians who are in favor of this law are those few who favored the attempt to foist compulsory health insurance upon the people of California and who are in favor of other forms of State medicine and the socialization of medicine and public health. A few physicians emphasize the fact in personal conversation that they are opposed to the measure, but frankly admit that on account of the threatened dangers to their practice they prefer to take no open stand. Physicians who favor State medicine or the socialization of medicine are usually also in accord with the same socialistic features of this law that appeal to the non-medical man.

The Sheppard-Towner law is not only an extreme example of what those favoring "state medicine" would like to have done, but it is one that puts the control of a medical question into the hands of a Federal bureau at Washington. So long as the physicians and other health officers of California comply with the rules of a bureau of the Department of Labor at Washington, they may have a certain amount of the taxes they have paid to the Federal Government back, provided, further, that they will tax themselves for an extra dollar for each dollar of their former Federal taxes that the Labor Department hands back to them.

Every physician, as well as every other worthwhile citizen, is earnestly interested and active in doing everything possible in a practical manner to reduce the hazards of childbirth and increase the happiness and health of mothers and infants, as well as of all other citizens. A recent survey shows that the physicians of California give an average of one-third of their time to service for which no fee is charged. Preliminary records from a further survey also indicate that physicians do not refuse their service in childbirth regardless of the patient's ability to pay, nor do they refuse their services during the period of gestation and the necessary period after birth.

In a recent resolution, the State Medical Society has gone on record as stating that every physician's office in California is a medical center to which any and all people may go and receive service, upon the condition that those who cannot pay or who can pay part will receive the same consideration as those who can pay. Physicians are ready and willing to increase the amount of free work, and they are willing to help both with services and taxes our own State and county health authorities extend help wherever it is needed *to those who are unable to pay for it themselves*. However, they do not extend this offer to the Department of Labor in Washington with a special organization of lay people who already, in some instances, are busy undermining physicians among their own clients in this and in other States.

Governor Richardson and the legislature are charged with the responsibility of accepting or

rejecting the provisions of the Sheppard-Towner law and with the still greater responsibility of making an entirely new appropriation from the State treasury as called for by the law, which is to be expended in a free medical service to all people, regardless of social or financial standing. There unquestionably will be powerful pressure brought to bear to force favorable action on this law. There will be no organized opposition so far as we are informed. The medical profession goes on record with the protest here expressed as being unalterably opposed to the bill, for the reasons herein set forth in addition to others that readily occur to every person. They go on record at the same time with the statement that they are willing, as they always have been, to do everything possible in the way of service or financial assistance to decrease the hazards of childbirth among those people who are unable to bear the normal expenses for good medical care by any means provided and controlled by our own State and with no control by a political body in Washington.

Copies of this editorial will be transmitted to the Governor of California and to every member of the legislature and to the editors of newspapers throughout the State.

MEDICAL ETHICS NOT CHANGED BY ELECTIONS

(Considered by the Council of the State Medical Society at its meeting on January 6, 1922, and unanimously ordered published as an editorial in the Journal.)

An unusually large number of inquiries are being received by the Journal and in the office of the State Society requesting information regarding the effect of the recent election upon requirements for membership in the Medical Society and upon the ethics of the medical profession—at least, that is what the inquiries amount to.

Physicians, of course, all know that the ethics of the medical profession is a moral code, arranged by themselves for their own conduct. It has nothing whatever to do with the law, except that law-abiding citizenship is one of the fundamental requirements of ethics. All professions and all businesses of whatever character have codes which govern the requirements of their membership. It is even said that "there is honor among thieves."

The ethics of the medical profession are over 2500 years old and the fundamentals of ethics have remained constant during that period. Certain codes of ethics connected with religion and the law are even older than that of the medical profession, and some of these also have remained practically unchanged.

One of the principal requirements of medical ethics is that physicians shall recognize as confreres only those who have an approved amount of education in institutions of approved character; who comply with the laws of their community regarding licensure, and who subscribe to the principles of professional ethics. It is unethical, of course, for any physician to recognize by association, consultation or in any other professional way any person purporting to practice the healing art who does not come up to the educational and ethical

standards set by the medical profession for the protection of the public.

Not only do the provisions of medical ethics apply to the physician as an individual, but they apply with equal force to hospitals and institutions that care for the sick and which are served or expect to be served by doctors of medicine. Certainly no physician can honestly comply with the provisions of ethics nor his membership requirements in local, state or national medical societies who practices medicine in an institution that admits the inadequately qualified to membership on its staff or extends to such people the right to practice within its walls. Strong pressure calculated to nullify these requirements always has been brought to bear on hospitals and other institutions caring for the sick by the inadequately educated and sectarian practitioners of one sort or another. This problem is again being agitated as a result of the recent election in California.

Most of the worth-while hospitals in this State have included provisions in their articles of incorporation, or have adopted by-laws which insure adequate educational qualifications of all those who practice within the institution. Others have failed to do this and consequently now have a serious problem to settle, which ought to have been anticipated and about which they have had due notice for a number of years.

All organizations of physicians, hospitals, and medical educational authorities of the country require one standard of education and ethical conduct in accredited hospitals. There is no reason to believe that any of these national or state organizations will change their policies in this respect as a result of the California election.

The duties and responsibilities of the educated, ethical doctors of medicine in California are, therefore, provided and are perfectly clear. No member of the California Medical Association can live up to the constitution and by-laws of his organization, nor to the ethics of his profession, who does not utilize in his practice any and all methods of proved value and who consequently does not practice sectarian medicine; who recognizes in any way by consultation or otherwise those who do practice sectarian medicine, including all those who do not hold the academic degree of doctor of medicine from an acceptable institution of learning. Nor can a member live up to the requirements of his membership and the ethics of his profession who allows his name to be on the staff of a hospital or treats his patients in a hospital where the educational requirements are not equal to those of the medical profession as expressed by the academic degree of doctor of medicine from a university or other acceptable institution of learning. Those licensed to practice sectarian medicine in this State have a legal right to have their own hospitals and to set their own standards for themselves, their education and their hospitals, and this it is announced they propose to do. These hospitals, as well as those operated for physicians, should be properly labeled for what they are so that the public may have no difficulty in securing what it wants.

ANNUAL MEETING OF THE STATE MEDICAL SOCIETY

A skeleton outline of the program of the 1923 meeting of the State Medical Society meeting was published in the December number of the JOURNAL. It is hoped that as many as possible of our members, as well as other physicians, will plan to arrive in San Francisco for this meeting and stay through the next week to attend the American Medical Association meeting, as well as a number of other national medical meetings that will be held at the same time.

All persons interested in presenting papers to the State meeting should communicate promptly with the appropriate section officers. These officers, with their addresses, are listed in each number of the JOURNAL. Because the time devoted to the State meeting has been reduced, the Council rules that papers read by title before this meeting may be published in the JOURNAL during the succeeding year.

All members of our State Society are particularly urged to write to the hotel of their choice in San Francisco and make their reservations early.

Many of our members will be on one or another of the committees of the American Medical Association, and if we are to live up to the usual California standards as hosts, members from all parts of the State must combine to make both our own and the American Medical Association meeting successful.

INSULIN

Insulin is one of the names that has been given to the new anti-diabetic hormone extracted from fresh pancreatic tissue. It is a valuable asset in the treatment of diabetes, but it is not curative.

Von Mering and Minkowski (1889) found that a fatal diabetes followed the total extirpation of the pancreas. Lepine (1909) suggested that this type of diabetes might be due to the withdrawal of an internal secretion of the pancreas. Numerous, unsuccessful attempts have been made to isolate this hypothetical hormone. More or less success accompanied the work of Cohnheim (1903), Knowlton and Starling (1912), Scott (1912), Murlin and Kramer (1913), Kleiner (1919) and Paulesco (1921), but the work of these authors was not sufficiently conclusive to justify the use of such extracts in the treatment of diabetes in man. To Banting and Best (1922) belong the credit of isolating the pancreatic extract known as insulin and bringing convincing proof of its value in the treatment of diabetes.

In explanation of previous failures and partial successes, it had been assumed that trypsin and other proteolytic enzymes present in the pancreas destroyed the supposed, sugar-burning hormone of the internal secretion. Banting proposed to circumvent the action of these enzymes by taking advantage of the well-known fact that the acinar cells in the pancreas which secrete the digestive enzymes degenerate in from seven to ten weeks after the ligation of the pancreatic duct, whereas those of the islands of Langerhans remain more or less intact. Opportunities were afforded him

under Macleod at the University of Toronto for testing this theory and, in collaboration with Best, the work was successfully carried out. Such extracts when injected into depancreatized dogs caused a disappearance of all diabetic symptoms. Collip then prepared extracts from normal, adult, beef pancreas of a sufficient degree of purity to warrant their use in man and convincing results were obtained. It now appears that this extract may be prepared from any pancreatic tissue if the proper precautions are taken to circumvent the action of the interfering, proteolytic enzymes.

Insulin is injected subcutaneously, two or three times per day. Each cubic centimeter has a definite sugar-burning power which varies with the concentration of the extract, but which apparently has the same effect on all patients, regardless of the severity of the disease.

Alarming, toxic symptoms such as convulsions and death occur in rabbits when excessive doses are given. These symptoms are associated with a blood sugar as low as .04 per cent or less and may be due to the fact that the animals become too free from sugar because such symptoms may be completely and rapidly eliminated by the administration of sufficient glucose. Toxic symptoms, but fortunately of a less degree of severity, have been observed in patients who have received insulin in excess. These symptoms have also been promptly alleviated by the administration of carbohydrate. Fatalities may occur unless some such precautions as the following are taken. The natural tolerance of patients should be ascertained in grams of carbohydrate, protein and fat. The exact value of the food consumed should be known. The exact sugar-burning power of the insulin in grams per cc. should be known. The dosage of insulin may then be adjusted to fit any proposed diet without danger of the patient passing sugar and acetone bodies on the one hand or becoming too free from sugar on the other. As a reward for this type of careful management, patients who would otherwise remain chronic invalids, die in coma or from inanition will be restored to health by ample diets in proportion as insulin is available.

Varying degrees of partial starvation have been used in the past for the purpose of resting the pancreas and thus permitting it to recover from the degeneration produced by overwork. This method has been successful except in those severe cases where the natural tolerance has been insufficient to nourish the patient even when kept continuously at bed-rest. Theoretically the pancreas may be rested by the administration of insulin while the patient is enjoying a fairly liberal diet, regardless of the degree of severity of his disease. It remains to be seen to what extent the natural tolerance may recover with this added help.

To protect this extract from commercial exploitation but with no thought apparently of financial gain, the discoverers have applied for patents in Canada, the United States, England and other foreign countries.

THE RUSSIAN MATERNITY SYSTEM HAS DESTROYED, MORALLY, AS WELL AS PHYSICALLY, A WHOLE RUSSIAN GENERATION

A Crime Which Knows no Parallel in the History of the World

Since the passage of the Sheppard-Towner Maternity Act the fact that the opposition to this class of legislation has grown to such enormous proportions, speaks well for the sense and character of the American people. The unwelcome publicity given to the real character of the bill led to the resignation of Miss Julia Lathrop, head of the Children's Bureau, and one of the bill's chief promoters. Her successor, Miss Grace Abbott, is, like Miss Lathrop, a product of Hull House, although this fact, for some reason, was nowhere mentioned by the press.

The Children's Bureau, which is to have large sums annually from the Federal treasury for propaganda purposes, if the bill passes, has already issued a booklet at the expense of the taxpayers, "Maternity Benefit Systems in Certain Foreign Countries," which is socialistic and bolshevistic in almost every line. This book gives unqualified endorsement to a socialist's book by Madam Kolantai, a Russian woman in the pay of Germany, who is "commissar of Public Welfare" under Lenin (see documents 1 and 7 issued by United States Bureau of Public Information, September, 1918). The work of her department, in taking children away from their parents and herding them together in the "care" of the soviet government, has had such disastrous results, notably with little girls, that it has been characterized by a distinguished Russian, Professor Boris Sokoloff, as *a crime which knows no parallel in the history of the world*. They have destroyed, morally, as well as physically, a whole Russian generation. Sir Paul Dukes says that the central tragedy of Russia today is the results of Bolshevik corruption of children under Madam Kolantai's "welfare" and "maternity" system.—Editorial, Illinois Medical Journal, January, 1923.

CALIFORNIA PHYSICIANS HOSTS TO THE AMERICAN MEDICAL ASSOCIATION

At the suggestion of the Finance Committee and the Central Committee of Arrangements for the American Medical Association Convention in San Francisco, June 25 to 29, we wish to call the attention of all our members to the fact that WE ARE HOSTS AT THIS GREAT NATIONAL CONVENTION. Many of our members are or will be on the various committees. The most important of all of these committees is the Finance Committee. You either have received or will receive a letter from the Finance Committee asking for your contribution toward the expenses of entertaining this Convention. It is urgently requested that every member of the State Society contribute whatever he feels he can contribute for this purpose. Members are contributing from \$5 to \$100 each. It is also particularly requested that the card accompanying the letter be promptly filled out, check attached, and mailed to Dr. John Gallwey, Treasurer, 808 Balboa Building, San Francisco. Please attend to this before you forget it.

MEDICAL, SOCIAL AND SIMILAR PRIVATE OR CONFIDENTIAL "EXCHANGES"

Many physicians and most of the public have an indefinite idea as to just what the "confidential exchange" idea means to those who may need medical advice. The idea originated, as so many ideas of this character do, in connection with medical service for those who were unable to pay. It did not mean much even at that time and, of course, it was not difficult to foresee at any time just where it was headed. It has been making tremendous strides, the most recent and pernicious of which is a scheme of this nature that sells its staff appointments to physicians and through connection with various mail order "doctors" and organizations, practices medicine by mail, directing the curious into certain channels for securing medical advice. Judging from the number of inquiries that the State Medical Society is receiving about some of these ventures, we must infer that the business of confidential exchange is profitable. The only thing confidential about these exchanges is that it is a confidential arrangement between certain specified persons, groups and organizations and certain other specified groups and organizations for their mutual advantage—at least, this is so in all of those who do any work with patients able to pay—and the practice is equally unsound whatever the class of patients. These organizations are known by various names and their contacts at both ends are of various kinds. The Journal wishes to warn the members of the State Medical Society against the possible difficulties connected with contacts with organizations of this kind.

RESOLUTION FIXING ADEQUATE EDUCATIONAL REQUIREMENTS FOR STAFF MEMBERS OR THOSE PRACTICING IN A HOSPITAL

The Hospital Betterment Service of the League for the Conservation of Public Health receives numerous questions from hospitals as to what they can do to insure adequate educational requirements for those who practice the healing art in the hospital and how they can protect their institutions, and those dependent upon them for advice, in all matters medical. The resolution given below was passed by the hospitals of California in convention assembled. It also has the approval of the League for the Conservation of Public Health and of the State Medical Society. The sense of this resolution is embodied in the articles of incorporation of many hospitals. It forms a by-law or an announcement of policy of many other hospitals. This staff requirement applies only to those hospitals that consider themselves agencies of medicine.

Hospitals conducted for the convenience of osteopaths, chiropractors, naturopaths, naprapaths, mental and various drugless practitioners licensed to practice so-called special methods will, of course, provide requirements acceptable to those who patronize and practice in these institutions. It is, of course, clear that hospitals cannot be of both classes at the same time.

Resolution

Resolved, that any person permitted to practice medicine by any method in any department of

— Hospital shall be a physician holding the degree of Doctor of Medicine from an institution of learning acceptable to the Association of American Medical Colleges, or the Council on Medical Education and Hospitals of the American Medical Association; who practices ethical medicine by utilizing any and all knowledge of proven value in the prevention, diagnosis and treatment of disease; who is licensed to practice medicine and surgery in the State of California and whose ethical, professional, moral and social conduct is such as to meet the approval of his colleagues and of the community.

MEMBERSHIP DUES

The constitution and by-laws of the State and County Medical Societies provide that annual dues shall be paid before March 1. After March 1, members who have not paid their dues lose the rights of medical defense and usually lose their inclusion in the published list of members in good standing for the year, both in the State Society and in the American Medical Association. The list of members in good standing is reported to the A. M. A. on March 1.

Representation in the House of Delegates of the State Society is based on the membership in good standing in each County Society as of March 1. For these and other reasons, it is exceedingly important that this matter receive the attention of all officers of the County Societies and of all members. Secretaries of County Societies in particular are requested and urged to send in their lists of membership with their checks for the State Society before March 1.

SCIENTIFIC EDITORIALS

The officers of the various sections of the State Medical Society have agreed to furnish scientific editorials for the Journal, the officers and members of the sections co-operating to produce timely editorials that will reflect progress in each of the various recognized specialties of medicine.

The officers of sections are listed in the Directory of Medical Organizations published in each number of the Journal.

This issue contains the first of these scientific editorials. It has been prepared by the secretary of the section on physiology, chemistry and pharmacology.

The co-operation of the officers and members of all sections is invited, to the end that this department may be made valuable.

THE SECTION ON SURGICAL ANATOMY

It will be recalled by readers of the Journal that the California Medical Society has recently added several new sections to the roster of its departments. It is to the newly formed division of Surgical Anatomy and Allied Sciences that I here wish to call your attention.

The State Society and the officers of this section trust that its entrance into the present field of medical and surgical subdepartments will assist in rounding out our annual scientific programs since contributions by this section should deal more especially with clinically applicable aspects of the basic subject of Anatomy and Embryology. It seems to us reasonable to assume that from the large numbers of papers written each year for the different departments falling under the head of General Surgery, a considerable number should be found to have much of their subject matter

grouped about structures of applied anatomic importance. It is hoped, too, that with the foregoing papers of this section may be included surgical procedures and paths of approach which owe their usefulness to the utilization of embryologic principles.

We are looking forward to interesting in this field, surgeons whose work includes bones and joints since this surgical subdivision bears a definite relationship to applied details of anatomic structure. Gynecologic and urologic surgeons also profit much from a knowledge of the intrinsic anatomy of their particular surgical domains as well as derive much advantage from a groundwork knowledge of embryology. One might multiply such statements throughout all the surgical divisions, but the purpose of this communication is but to call to the attention of the members the fact that an effort is being made to revive a subject, the teachings and application of which in recent years has perhaps suffered somewhat.

In the hope that interest may be awakened in this subject, an invitation is proffered to, and co-operation assured, men who desire to use surgically dissected anatomic material which is on hand in the Surgical Anatomic Laboratory of the University of California Medical School in San Francisco. Since our department is a new one, our list of surgical study dissections is not as yet complete, but what we offer may be of some value in the preparation of surgical papers. Our plan of study in teaching, as well as our mode of dissection, has had as its basic principle, to follow applied anatomic paths of access toward the various involved structures.

We earnestly urge, then, the members of this society to submit to the Secretary as soon as possible, plans for the papers to be read before this section at our coming annual meeting. This meeting convenes in San Francisco on June 22 and 23, 1923, and thus precedes the annual meeting of the American Medical Association held in the same city, June 25 to June 29, 1923. Our section, and this applies as well for all other sections of the Society, meets but for one scientific program on Friday, June 22, at 2 o'clock p. m. At that time papers may be read in full or by title and they may subsequently be published in the California State Journal of Medicine. The Chairman, I. S. Ritchie, Loma Linda, and the Secretary, C. Latimer Callander, M. D., 240 Stockton street, San Francisco, invite correspondence and co-operation in the all year round work of their section.

Nearsphenamine Adopted by the U. S. Navy.—

In the U. S. Naval Medical Bulletin of October, 1922, Rear Admiral E. R. Stitt, Surgeon-General of the U. S. Navy, recommends the substitution of nearsphenamine for arsphenamine in certain hospitals aboard ship in the navy. The recommendation states: "1. I would recommend that the use of arsphenamine be discontinued on board ships of the Navy and in its place to substitute nearsphenamine. This same recommendation would apply to stations and smaller hospitals. 2. In the larger hospitals where facilities for the administration of arsphenamine are satisfactory, the choice between arsphenamine and nearsphenamine should be left to the discretion of the commanding officer. 3. This recommendation is made for the following reasons: (a) In discussing fully this matter with the director of the hygienic laboratory he is of the opinion that most of the accidents attending the use of arsphenamine have been connected with errors in technic. In view of the simplicity of technic when using nearsphenamine many untoward results would be eliminated. (b) In the clinic of the Brady Institute, nearsphenamine is used exclusively, and the staff are unable to note any lessened therapeutic efficiency with this than when arsphenamine is used."

FIRST ANNUAL REPORT OF CORNELL PAY CLINIC

This report contains interesting and instructive data to all the physicians interested in the welfare of their profession. Twenty-two thousand four hundred and nine people made 113,981 visits to the clinic during the year. This is an average of a little over five visits per person and an average payment to the clinic by the patient of \$1.57 a visit. The average attendance at the clinic was 317 patients and there were 122 physicians on the staff, exclusive of the senior members of the faculty of Cornell Medical School. The total income for the year was \$179-685.09 and the total expenses of the clinic were \$231,875.40 or a net loss of \$52,190.31. In other words, with a tremendous volume of business among ambulatory or office patients that paid \$1.57 each per visit, the business still lost a large amount of money. The services cost the clinic to render \$2.03 a visit. The amounts paid to the 122 physicians for service is not stated, nor is it stated whether or not the value of physicians' services were included in the costs of the clinic. This ought to be, as it undoubtedly is, of very great surprise to people who believe that volume of professional work, like volume of business in any other walk of life, can be rendered cheaper to the consumer than the same service when rendered by numerous small businesses. The fees charged by the Cornell Pay Clinic equal—if they are not greater than—the average fees charged under the Industrial Accident Law of California and many other States; yet in California private physicians and groups of physicians compete keenly for private business upon this basis. One group of physicians in California who performed last year just about the same volume of services as that performed by the Cornell Pay Clinic, rendered these services at a fee schedule—in the aggregate—less than Cornell Pay Clinic and made a profit of \$50,000 or more. Of course, enthusiasts may say that the quality of service rendered by Cornell Pay Clinic exceeded that of the private group of physicians in California. Nevertheless, that should not be much consolation for physicians to endorse and back up group medicine run by a university faculty upon any financial, or, for that matter, upon any other sort of scheme. The public certainly ought not be able to find a great deal of consolation out of a service for ambulatory patients that cost \$2.03 a service when a large percentage of the physicians of the United States are operating upon a fee schedule that does not go over this figure. We know very well that in California fully 50 per cent of the six thousand physicians in this State—many of whom have been educated in Cornell University—would be very glad indeed to be kept busy even half of their time with the class of patients who could pay \$2.03 for office visits. According to the report, the authorities of the Cornell Clinic attempted to handle a class of patients who were unable to pay the normal fee or private physician fee and yet who did not want to receive charity. Are people who pay \$1.57 a visit in this class? If they are, most of the people belong to it, and if the scheme were generally applied, we would not only have socialized medicine but very expensive socialized medicine. It is interesting to note that according to their statistics only 10,202 of the 22,409 patients who applied were classified as being in the group covered by the clinic. Four thousand five hundred and twenty people were rejected by this clinic because they could not pay \$1.57 a visit; only 322 out of the 22,000, however, were refused because they were adjudged able to pay fees of private physicians.

The report emphasizes the "close bond existing between the clinic and the medical profession." We would rather hear from the medical profession itself before accepting a statement of this character as one of fact. The closeness of the bond is indicated by another statement of the report whereby it is claimed that 824 doctors referred 1360 of their

patients to the clinic. This does not look like an exceedingly "close bond." Another advertised feature of the clinic is its service as a diagnostic clinic, and yet we notice that this had only 369 patients referred by physicians out of the total of 113,000 visits of all classes.

The report makes the statement that a considerable number of patients could not afford continued treatment even at \$1.57 a visit, and that they were, therefore, forced to carry them without charge or send these patients where they could have "free treatment." Of course, the economists who are working on the financial and organizational problems of the pay clinic know perfectly well that there is no such thing as "free treatment." What they mean, of course, is what other people mean when they talk about free treatment and that is, that the patient should be shifted to some place where the cost of treatment would be borne by somebody else. Usually these "free treatment" places are those that are supported either by taxation or by public contributions, and the costs of service are absorbed, or covered up or made innocent-looking to that part of the public that takes an interest in such matters. Altogether the report of the first year's work of the Cornell Pay Clinic does not warrant conclusions creditable to the movement. Some day the members of the medical profession will realize that there is only one kind of a clinic that should have 100 per cent of their endorsement and support, and that is the clinic that should exist in the office of every physician. The greatest need of medicine at the present time is for physicians and for the public to get the old-time conception of what a physician's office and physician's service mean to such an extent that they feel at liberty to apply to their physician whether they can pay or not, and expect to pay whatever proportion of legitimate fee they can pay, and expect to have the confidential, sympathetic, efficient service of the physician upon that basis. With one educated physician to approximately every seven hundred people in this country, if every physician's office were made a "clinic," a "health center," or, as it should be, a physician's office, everyone could have good medicine at what he could afford to pay. There would be no need for other clinics, and the physicians would still not be overly busy. If there is a place for the Cornell Pay Clinic or any similar monument in the scheme of things medical, it constitutes a serious indictment of the practices and policies of the medical profession.

JUDICIAL MATTERS

1. Another Lawsuit Against the Federal Maternity and Infancy Law.

With the action of the Commonwealth of Massachusetts against the federal officials who administer the maternity and infancy act pending the United States Supreme Court, another lawsuit against these officials was brought on December 20 by Harriet A. Frothingham in the Supreme Court of the District of Columbia. Mrs. Frothingham, who is a resident of Massachusetts, sues as a taxpayer of the United States and claims Congress exceeded its power in passing the legislation. She asserts that it interferes with state rights and personal liberty.

The state of Massachusetts has not accepted the provisions of the act and Mrs. Frothingham says she will be compelled to pay taxes toward the annual expense provided for in the bill, and thus be required to pay for advantages to other states. She says her right as a citizen has thus been invaded and violated. Congress has no power, the court is told, to enact such legislation, as it is wholly and exclusively within the jurisdiction of the several states. Congress also undertakes by this bill, it is stated, to delegate to the board of maternity and infant hygiene and to the Children's Bureau,

power to legislate with respect to the provisions of the bill, a power which cannot be delegated.

Named as defendants are the Secretary of the Treasury; Grace Abbott, Chief of the Children's Bureau; Hugh S. Cumming, Surgeon General of the Public Health Service; and John J. Tigert, Commissioner of Education.

2. A court decision on social hygiene.

Ex parte Carey, 207 Pac. R. 271

Facts. The Carey woman was arrested for solicitation on the streets of San Francisco, California, and committed by a police court to the California Industrial Home for Women in accordance with the provisions of a state law. She sued out a writ of habeas corpus (see Statement No. 37, p 5) but was remanded to the institution by the District Court of Appeal of the Third District of California.

Holding. The court held that the law was not discriminatory and that prostitutes were so dangerous to public health that their detention was proper. In the course of the opinion, these significant remarks appear:

"They (fallen women) present a greater single element of economic, social, moral and hygienic loss than is the case with any other single criminal class. Not only do they constitute a menace to the morals and social welfare of mankind, but they carry very unusually heavy pathological liabilities. In truth, from the standpoint of public health, they are sometimes referred to as pestilential and their places of abode as pest houses. The law declares them to be a public nuisance. Altogether, they present the most perplexing problem with which modern penology and social legislation are called upon to deal. The fallen women occupy a relation to society very analogous to that of the chronic typhoid carrier, a sort of clearing house for the very worst forms of disease. The right to quarantine persons suspected of contact with infection is usually upheld by both state and national governments. The right to quarantine at all implies the right to continue the isolation so long as danger remains. That a woman carrying on a business denounced in the statute is a constant pathological danger, no one would question."

3. Failure to report communicable disease.

Moorehouse vs. Hammond, 209 Pa. R. 883.

Facts. A physician in a Utah town failed to report a case of smallpox in writing to the health officer, though he did report it orally. The director of registration with a committee of physicians held a hearing, found the physician guilty of unprofessional conduct and revoked his license to practice. The case was taken to the Utah Supreme Court, which set aside this revocation and restored the license.

Holding. The State laws of Utah require the reporting to the local board of health of infectious or contagious disease. The local ordinance required such reports in writing. The court held that this ordinance was without force because it imposed greater duties than the state law. It was likewise ineffective because it declared no punishment for failure to report. A statute or ordinance not having a penalty is unenforceable, says the court. The order of the director of registration therefore fails, as it is based on this law. Furthermore, the physician substantially complied with the statute by an oral report. In conclusion, the court states that it is reluctant to interfere with rules and ordinances of health boards, which represent the highest functions of government, but that the rights of a citizen must be protected.

Comment. This case brings out forcibly the necessity for carefully drawn State and local laws relating to health matters.—(National Health Council, Summary, January 1, 1923.)

STATE SOCIETY

ABSTRACTS FROM THE MINUTES OF THE 136TH MEETING OF THE COUNCIL OF THE MEDICAL SOCIETY OF THE STATE OF CALIFORNIA.

Held in San Francisco, Saturday, January 6, 1923.

The complete minutes of this and all other Council meetings are on file in the office of the State Society and are open to any member of the society.

Present: Brainerd, Edwards, Bine, Parkinson, Kress, Kiger, De Lappe, Ewer, Van Zwahlenburg, McArthur, Pope, McLeod, Parker, Paterson, Musgrave, Johnson and General Counsel Peart.

Absent: Hamlin and Carrington.

Appointment of Councillor for Sixth District—Upon nomination of Pope, seconded by Van Zwahlenburg, Walter B. Coffey of San Francisco was unanimously elected to fill the vacancy in the sixth district caused by the passing of C. G. Kenyon.

Reorganization of the Council—Upon nomination of Kress, seconded by Pope, James H. Parkinson of Sacramento was unanimously elected chairman of the Council to succeed C. G. Kenyon, deceased.

Passing of C. G. Kenyon, chairman of the Council—Upon motion of Van Zwahlenburg, seconded by Paterson, it was

Resolved, That the chairman of the Council appoint a committee of three to draw up a resolution on the passing of Doctor C. G. Kenyon.

Chairman appointed Edwards (chairman), Van Zwahlenburg and Paterson as members of this committee.

Hotel Headquarters for State Society and A. M. A. Meetings in June, 1923—The associate secretary reported that tentative arrangements had been made with the Hotel Whitcomb for the reservation of fifty rooms for accommodation of the Council and Society officers during the State and A. M. A. meetings in June.

Action by the Council: Upon motion of Van Zwahlenburg, seconded by Kress, it was

Resolved, That the Hotel Whitcomb be made hotel headquarters for the State Society during the State and A. M. A. meetings in June, 1923; and further, that the secretary be instructed to make reservations for all members of the Council.

Articles of Incorporation of State and County Societies—The question of incorporating the State and county societies was discussed by the general counsel, who advised that nothing be decided upon unless under some uniform plan which had the approval of the A. M. A. He stated that there was no present need for incorporation of the State Society. Regarding incorporation by a county society, he suggested that any there-of might incorporate if they so desired, such corporation to be empowered to hold real or personal property for the Society. It was the sense of the Council that this matter should be referred to the general counsel for report as to form or method and desirability of such procedure.

Action by the Council: Upon motion of Kress, seconded by Bine, it was

Resolved, That the general counsel ascertain the present form and method of incorporation of the Los Angeles County Medical Association, and further, that he use such information in the preparation of uniform articles of incorporation for the assistance of other county societies desiring to incorporate.

Incorporation of the Indemnity Defense Fund—General counsel reported the present status of the Fund; the results of the letter sent to all members of the Fund on December 18, 1922, regarding the contemplated incorporation, and explained fully why it appeared necessary and advisable to incorporate the Fund. This matter was also discussed by Dr. Duffield and others.

Action by the Council: Upon motion of Kress, seconded by Bine, it was

Resolved, That the chairman appoint a committee of five, consisting of three members of the Board of Trustees of the Indemnity Defense Fund and two members of the Council, which committee shall act as "attorneys in fact" under the proposed "power of attorney" submitted by the general counsel; that the form of proposed "power of attorney" submitted by the general counsel be approved; and that the publicity bureau and said committee and the officers of the Society be authorized to proceed with the work of fully informing all members of the Fund of the incorporation plan and considerations relating to same in order to determine the wishes of the members of the Fund in reference to incorporation.

The chair appointed Lemuel P. Adams, W. E. Briggs, William Duffield, W. T. McArthur and Saxton T. Pope.

Policy Regarding Credit to Editorial Writers—The question of co-operation between scientific sections and the State Society was discussed particularly with reference to the furnishing of editorials by the sections for the State Journal. It was the sense of the Council that no credit should be given to editorial writers, but that the editorial section of the Journal should remain as it is at present—impersonal and representing the policies and opinion of the entire organization.

Question of Dividing the United States into Territorial Districts—The secretary discussed the advisability of dividing the United States into territorial districts as

contemplated by the A. M. A. at the St. Louis annual session.

Action by the Council: Upon motion of Paterson, seconded by Kress, it was

Resolved, That the chair appoint a committee of three to investigate the matter of dividing the United States into territorial districts, from the standpoint of the Medical Society of the State of California, and further, that this committee report to the Council and the House of Delegates at the coming annual meeting.

The chair appointed Paterson (chairman), Kress and Pope.

Industrial Medicine—Parkinson, chairman of the Industrial Accident Committee, read a letter just received which stated that the proposed fee schedule was not yet completed, or in shape for presentation to the Council. He stated that his committee hoped to have the proposed plan and fee schedule ready for presentation to the Council at its next meeting.

Parkinson then read a letter from the secretary of the Los Angeles County Medical Association enclosing a resolution passed by the Industrial Accident Section of the Los Angeles County Medical Association, together with correspondence addressed to the State office by the secretary of the State Section on Industrial Medicine and Surgery.

Upon motion of Kress, seconded by McArthur, it was Resolved, That the secretary of the Section on Industrial Medicine and Surgery of the State Society be called in to present the views of his section on this subject.

Resolution of Industrial Accident Section, Los Angeles County Medical Association—Thurber then presented the views of his section to the Council. A general discussion of the subject followed. It was the sense of the Council that Thurber be authorized to carry the assurance of the Council of the State Society to his section, that any plan and schedule relating to industrial accident work would be submitted to the entire Society membership for consideration and that this had always been the intention of the Council, and that, until the Industrial Accident Section had been given an opportunity to study and pass upon the plan and schedule the proposed plan and fee schedule would not be adopted by the Council.

Journal Editorials—The following editorials were considered for publication in the California State Journal of Medicine: "Sheppard-Towner Law," "Medical Ethics Not Changed by Election."

Action by the Council: Upon motion of McArthur, seconded by Van Zwahlenburg, it was

Resolved, That these editorials be published in the February issue of the California State Journal of Medicine.

The question of furnishing county societies with copies of the editorial on "Medical Ethics Not Changed by Election" was fully discussed.

Action by the Council: Upon motion of Kress, seconded by McArthur, it was

Resolved, That the secretary-editor have printed 500 copies of the editorial on "Medical Ethics Not Changed by Election," and further, that these reprints be sent in appropriate numbers to the county societies as an expression of the attitude of the Council on this subject.

Financial Statement and Audit for Year 1922—The associate secretary read the yearly financial statement and report of audit by Klink, Bean & Co. for the year 1922. The Council ordered copies of these papers sent to each of the councillors.

EARLY TRANSACTIONS OF STATE SOCIETY

A few observations from the transactions published during the early years of this Society's existence. On October 19, 1870, Dr. T. M. Logan, of Sacramento, delivered an address before The State Medical Society of California, in which he said, among other things, the following:

"Fourteen years ago, in association with the lamented Cooper, who was the leading spirit of the occasion, I officially signed the call, as corresponding secretary of the Medical Society of Sacramento, for a convention in that city, to inaugurate the scheme which we are now assembled to resuscitate. The objects for which the State Medical Society was formed did then, as they do now, enlist my warmest interest and command my active co-operation; and, judging from the intelligent—many of them old familiar—faces around me, I have reason to believe that I entertain these views and professions only in common with you all.

"Prior to this organization, as most of you well remember, the medical mind was in a state of inertia—the profession in a chaotic condition. The dominant materialism of the Golden Age, which had invaded every department of human activity, and inverted the natural order of things by subjecting the higher to the lower, was degrading medicine into a mere business, leading men of real ability, who might have been remembered as benefactors of their

race, to spend their noble energies in building up an extensive practice. . . .

"Had the State Society done nothing else than conserve its subsequent transactions through publications, it would have performed a service entitling it to an imperishable name in the medical annals of our country. But it has done more than this; and we proudly point, among its results, to our medical colleges, our monthly periodicals, our numerous local societies, our municipal boards of health. . . .

"The 'American Medical Association' are coming to kneel side by side with us at a common altar, and pour the acquisitions of their devoted lives into a common treasury. At the sacrifice of their time and business—foregoing all the comforts and endearments of home, and subjecting themselves, on their way hither, to the hazards incident to the velocity of locomotion at the present day—they are coming from every portion of this great continent."

At the close of Dr. Logan's address, Dr. A. B. Stout, of San Francisco, moved that this convention organize itself into the State Medical Society. This motion was carried. The committee on credentials reported 101 names of physicians, with residence, school and date of graduation, as being present, and after some discussion the chair stated that all of those whose names had been reported were permanent members of the State Medical Society.

As an indication that all was not absolute peace and harmony among California physicians even in those days, the following is taken from the transactions of those minutes:

"A member from the interior having, in the course of remarks, referred to the profession in San Francisco as bearing the reputation of being divided into hostile cliques, Dr. H. Gibbons, Sr., requested the privilege of correcting the error. He said the great body of physicians of the city were in perfect harmony; that, as a matter of course, among so many there were a few natural growlers, who seemed to take great pleasure in giving a bad name to the body; but that the two medical associations in this city enjoyed the most perfect harmony—both in their own membership and in regard to each other. Differences of a personal or professional character were really very uncommon among the physicians of San Francisco."

At the evening session Dr. T. M. Logan of Sacramento was elected president; vice-presidents, S. R. Harris, of San Francisco; T. H. Pinkerton, of Oakland; J. L. Ord, of Santa Barbara; G. A. Shurtless, of Stockton; and D. B. Hoffman, of San Diego; corresponding secretary, George Hewston, San Francisco; recording secretaries, A. B. Nixon, of Stockton; and D. B. Hoffman, of San Francisco; treasurer, A. B. Stout of San Francisco.

Of interest in connection with the recognition of women physicians by the medical profession is the following resolution introduced on the second day of that meeting by Dr. Hoffman of San Diego:

"Resolved, That all persons, of either sex, who possess the qualifications prescribed by the Constitution may become members of this society.

"On motion of Dr. Stout, the resolution was laid on the table."

The question of physicians being called into court as experts and witnesses was acute even at that time, as is shown in the following:

"Dr. H. Gibbons, by permission, gave a brief and forcible address on the annoyances and pecuniary and professional sacrifices the members of the medical profession are frequently obliged to endure in being called into courts of justice as experts and witnesses, and to make post-mortem examinations, without just recompense for the same. He moved that a committee of three be appointed by the Chair to examine into the subject, and report at the next annual meeting. Carried." At this time also, Dr. Hays offered the following resolution:

"Resolved, That a committee of three be appointed by the Chair, to secure the passage of an

amendment to the laws organizing the State Board of Health, to enforce the registration of deaths, births, etc., to enable the Board of Health to secure more complete statistics in relation thereto. After a spirited discussion, the resolution was lost."

It seems that there was considerable enthusiasm regarding the advisability of cultivating the cinchona tree in the United States, which was covered in the following resolution by Dr. Stout:

"Resolved, That a committee be appointed to address the Legislature of California and petition that honorable body to appropriate ——— acres of land, situated in ———, for the cultivation of the cinchona tree, in accordance with the memorial of the American Medical Association; and also for the creation of a botanical garden."

The Medical Society of the State of California was incorporated on the first day of November, 1870, in the following language:

"We, the undersigned, residents of the State of California and of the United States of America and citizens thereof, and representing as its executive officers, the members of the Medical Society of the State of California, do hereby certify that, under and by virtue of 'An Act of the Legislature concerning corporations for charitable and beneficial purposes,' approved April 4, 1870, we have associated ourselves into an incorporate body or society, which shall be known as The Medical Society of the State of California.

"The objects of said society shall be in conformity with an adopted and published constitution in the year 1856, to take cognizance of the common interests of the medical profession in the State of California."

"Regular meetings shall be held annually on the second Wednesday of October. The county and place of meeting, in the State, of said organization shall be determined for each next succeeding year by vote of the society. There shall be no established office or principal place of business for the said corporation, which shall exist for an indefinite term in accordance with the will of the majority of the members from the date of the filing of this certificate.

"In Witness Whereof we have hereunto set our hand and affixed our seals, as well as the seal of our society, this first day of November, A. D. 1870. ((Corporate Seal)

"Thos. M. Logan, President (L. S.); A. B. Nixon, First Secretary (L. S.); Henry Gibbons, Jr., Second Secretary (L. S.); George Hewston, Corresponding Secretary (L. S.); Arthur B. Stout, Treasurer (L. S.)."

At the meeting of the society, October, 1871, the roll-call showed 153 members, representing almost every county in the State. During this meeting Dr. Montgomery of Sacramento offered the following resolution regarding ethics, which was adopted:

"Resolved, As the sense of this society, that the subject of medical ethics should receive a larger share of attention in the medical universities and colleges of the country, to the end that the true principles inculcated therein may be more thoroughly impressed upon the minds of the students, and, in consequence, more faithfully and scrupulously observed by them in their subsequent professional career."

Dr. Cole of San Francisco offered a resolution on requirements for membership which would be more effective and more nearly correct than the requirements of some organizations of the present day:

"Resolved, That the Board of Censors shall recommend no candidate for membership until he shall have presented his diploma or other evidence of being a graduate of a recognized school, and of good standing; and that no voucher of a single member shall be considered sufficient evidence of his qualifications."

The president's annual address at a banquet in the year 1871 is a valuable and interesting review of past attainments of the medical profession and

predictions regarding its future. Many of the predictions made at that meeting are still predictions today. One statement contained in the annual address of the president that is still being repeated by the profession is interesting enough and applicable enough to today's problems to quote:

"Now this condition (lack of publicity) of things should not exist, and the question arises what is to be done? I reply, let us educate the masses—this is our work for the future.

"Too long for our interest and that of our race have medical men ignored this important duty. So filled with dignity has the profession been that they could not stoop to approach the people through the main channels by which they can be reached—the daily press and public lecture room. 'With dull apathy we have seen the followers of most other professions seeking to avail themselves of these elements of power, some for good, some for evil. The clergyman has not trusted alone to supernatural power in keeping alive the truths of revelation and arousing in the people a due respect for its lessons. They have watched with 'jealous care' the education of the young, and from the Sabbath school to the university they exercise the greatest control. And legislators, through their political organizations, public speeches and control of the press hold the masses, as it were, in the hollow of their hands.'"

We will close this very brief, sketchy reminder of other days in medicine by a brief abstract from an address of the annual meeting of the society in 1874 by President T. H. Pinkerton:

"The fool of Nottingham being asked by his master what profession or calling had the greatest number within its ranks in that town, replied: 'Truly, master, I think there be many more physicians in Nottingham than men of any other pursuit.' 'A very fool thou art,' replied his master; and the fool rejoins, 'I will prove what I have said.' He was encouraged to do so by the promise of a gold piece. So he went about the town with his face tied up as if suffering from a dreadful toothache. Everybody he met pitied him; everybody, too, prescribed for him; he noted their names and their nostrums. Being seen last by his master and getting his prescription, he submitted the whole list, and his master acknowledged that he had proved his saying.

"Can anyone of us doubt that a similar investigation would lead to the same results in our own day and in the towns or cities in which we live? Is there not even reason to believe that the number of those who depend upon regularly educated physicians for counsel and advice is less among us than in other countries and other times? The precocious habits of our country have, of course, been felt in the medical profession."

Is This Limited to Indiana?—Many doctors are members of churches and various organizations supported or sponsored by churches, and such doctors have a right to protest against the attitude of the various religious organizations that through their officers are upholding and actually working for some of the pseudo-medical cults. Some of the leaders in the Y. M. C. A. and Y. W. C. A. activities actually are "tooting" for chiropractors who at the present time are lawbreakers, to say nothing of being incompetent, yet these same ringleaders in Y. M. C. A. and Y. W. C. A. work are soliciting endorsement and financial support from reputable members of the medical profession. We have no objection to the preferences shown by ministers, Y. M. C. A. or Y. W. C. A. secretaries for legalized and reputable practitioners of medicine, but we do think that it is time for withdrawal of support of those religious workers when they not only uphold quackery, but actually work for quackery's advancement. If the Church and various religious associations, as organizations or through their officers, are going to support the pseudo-medical cults and quackery, then it is time for the regular medical profession to withdraw its support from such organizations.

COUNTY NEWS

LOS ANGELES COUNTY

Los Angeles County Medical Association elected the following officers at its annual meeting:

Officers for the Year 1923—William H. Gilbert, president; Joseph K. Swindt, vice-president; Harlan Shoemaker, secretary-treasurer.

Councillors—Carl Rand (1923), W. H. Kiger (1923), Rea Smith (1923), Walter V. Brem (1924), Wm. Bowman (1924), A. S. Granger (1924), Donald Frick (1925), Lyle G. McNeile (1925), J. Mark Lacey (1925); Paul A. Ferrier, Pasadena; John P. Nuttall, Santa Monica; E. E. Kelly, Pomona; Chas. G. Foote, Long Beach; Frank Detling, Eye and Ear Section; Wm. H. Gilbert, Obstetrical Section; Granville MacGowan, Urological Section; R. F. Has-treiter, Anesthesia Section; Irving Bancroft, Dermatologic Section; H. G. McNeil, Industrial Medicine Section; F. M. Pottenger, Tuberculosis Section; Franklin J. Tower, Southwest; Raymond G. Taylor, Radiological Section.

Trustees—Donald J. Frick (1925), Ray G. Taylor (1925), Fitch C. E. Mattison (1925), W. T. McArthur (1924), Wm. Duffield (1924), Wm. H. Gilbert (1923); Harlan Shoemaker (1923), secretary.

Medico-Legal Committee—Charles D. Lockwood (1923), Walter V. Brem (1924), Theodore Lyster (1925).

Permanent Quarters—F. C. E. Mattison (1923), Hill Hastings (1924), Wayland Morrison (1925).

Hospital Standards—Dudley Fulton (1923), E. C. Moore (1924), Clarence Toland (1925).

Industrial Accident and Contract Practice—Chas. C. Browning (1923), W. W. Richardson (1924), H. G. McNeile (1925).

Illegal Practitioners—R. E. Ramsay (1923), Frank W. Miller (1924), W. B. Kern (1925).

Mal-Practice Defense Committee—J. Scott Brown (1923), E. M. Palette (1924), A. B. Cecil (1925).

Library Committee—Wm. Duffield (1923), W. Jarvis Barlow (1924), Nelson W. Janney (1925).

Appointed by President

Scientific Program—Harlan Shoemaker, chairman; Wilbur Parker, Harry Olds.

Aid to Colleagues—Charles C. Browning, chairman; W. W. Hutchinson, George J. Lund, J. C. Horton, Olga McNeil, Robert A. Walker, Alhambra; F. M. Pottenger, Monrovia.

Committee for the Study of Fee Schedules—J. V. Barrow, chairman; J. Mark Lacey, Oscar Reiss, Philip Boller, E. H. Wiley.

Committee on Lay Medical Activities—Walter Huggins, chairman; O. R. Stafford, Clifton E. Gage, W. Edgerton Carter, C. H. Weaver, W. E. Hall, Harry Voorhees.

Public Health—W. T. McArthur, chairman; E. C. Moore, John Irwin, Wm. J. McKenna, Albert C. Germann, Karl Sleeper, A. H. Zeiler, M. M. Ross, Eleanor Seymour, J. L. Pomeroy, Donald Baxter, Irving Bancroft, Ernest G. Butt, Redondo Beach; Charles Bennett, San Dimas; A. T. Newcomb, Pasadena; Paul Roes, Hollywood; F. L. Rogers, Long Beach; J. K. Swindt, Pomona; John P. Nuttall, Ocean Park; H. P. Wilson, Whittier.

Co-operation with Allied Organizations—Edward T. Dillon, chairman; William Bowman, George Piness, Henry B. Lissner, Stanley Granger, R. V. Day, Charles Lockwood, Michael Creamer.

The Relationship of the Medical Profession to the Eighteenth Amendment—R. L. Crum, chairman; James F. Holleran, Lloyd Mills, Neal N. Wood.

Speakers' Bureau—T. J. Orbison, chairman; William Duffield, W. J. Haworth, Earl Sweet.

Committee on Medical Education—Walter Brem, chairman; Donald Frick, Theodore Lyster, Percy T.

Magan, W. A. Beckett, Sydney Burnap, Wayland Morrison.

Los Angeles County and Receiving Hospitals and Out-patient Dispensaries—C. G. Toland, chairman; Barney C. Coleman, A. J. Scott, Jr., C. G. Stadfield, Simon Jesberg, William H. Daniel.

Committee on Scientific Organization of Medical Practice—Dudley Fulton, chairman; P. G. White, J. Morris Slemons, Walter Crane, H. W. Spiers, Andrew Stewart Lobingier, Harold Smith, Henry Snure.

Delegates and Alternates for State Meeting—Delegates 1923—Donald Frick, Harlan Shoemaker, Granville MacGowan, J. Mark Lacey, Walter Huggins, Carl Rand, Raymond Taylor, Wm. Bowman, Chas. C. Browning, John P. Nuttall, A. S. Granger, Walter V. Brem.

1923-1924—Wm. H. Gilbert, A. J. Scott, Jr., H. G. McNeil, F. A. Speik, Packard Thurber, Phillip Stephens, O. I. Tower, T. C. Myers, A. H. Zeiler, Joseph K. Swindt, E. M. Palette, C. D. Lockwood, Lyle G. McMeile.

Alternates 1923—Jos. M. King, F. C. Swearingen, Carl H. Parker, Wallace Reed, H. H. Heylman, Harriman Jones, F. L. Morgan, C. G. Toland, John Mackey, Roland Cummings, Henry B. Lissner, J. G. Lynch.

1923-24—A. W. Moore, Michael Creamer, LeRoy Sherry, Elmer Kelly, A. R. Rogers, John P. Nuttall, Percy T. Magan, A. T. Newcomb, Robert Day, J. B. Gillis, John Barrow, V. R. Mason, Isaac H. Jones.

MARIN COUNTY

Marin County Medical Society (reported by Chester A. De Lancey, secretary)—The regular business meeting for the month was held on December 14 at the offices of W. F. Jones in San Rafael. The following officers were chosen for the ensuing year: President H. A. Howitt; secretary, C. A. De Lancey; delegate, J. H. Kuser; alternate, A. H. Mays; trustees, Kuser and Howitt. F. V. Simonton, associate professor of Dentistry at the University of California, addressed a meeting of the physicians and dentists of Marin County under the auspices of the Marin County Medical Society. Simonton chose as his subject, "Histologic Study of Result Obtainable Through Instrumental Treatment of Pyorrhea." Warden J. J. Johnston, who was a guest of the evening, discussed disease as a potential factor in crime and stated that fully 95 per cent of all entrants to San Quentin needed dental treatment.

MERCED COUNTY

Merced County Medical Society (reported by Brett Davis, secretary)—The first of the 1923 monthly meetings was held January 1. New officers elected for the year are: President, W. C. Cotton; vice-president, A. S. Parker; secretary-treasurer, Brett Davis; delegate to State convention, E. R. Fountain; alternate, B. H. Bush. T. R. Trick, Los Banos, was elected to membership. W. C. Cotton reported the results and case histories of two unusual operative cases of gall bladder disease, which were discussed with profit to all present. Doctor Davis also reported two gall bladder cases with operative histories. Hospital affairs and the subject of a full time health officer for the county were discussed.

RIVERSIDE COUNTY

Riverside County Medical Society (reported by Thomas A. Card, secretary)—The Society met December 11 in the Chamber of Commerce rooms, with 25 members and 15 visitors present. The following officers were elected for 1923: President, A. L. Bramkamp; Vice-President, Will H. Holmes; Secretary-Treasurer, Thomas A. Card; Ethics Committee, Brown, Dickson, Wills, West and Shank. Chas. W. Girdlestone, Riverside, gave a paper on Treatment of Pneumonia. Discussion was opened

by A. L. Bramkamp of Banning. This was followed by a symposium on Arterial Hypertension, (a) Etiology, A. N. Donaldson, Loma Linda; (b) Pathology, Newton Evans, Loma Linda; (c) Treatment, D. D. Comstock, Los Angeles. Discussion opened by Arthur L. Brown, Riverside. The Society were guests of Geith, Girdlestone, Gordon, Hall, Holland and Holmes at a buffet luncheon served at the close of the meeting.

SAN DIEGO COUNTY

San Diego County Medical Society (reported by Robert Pollock)—Following is the list of officers of the San Diego County Society for 1923: President, J. E. Jennison; Vice-President, A. B. Wessels; Secretary, L. H. Redelings; Treasurer, C. L. Stealy; Editor, Robert Pollock.

Council—Wessels, chairman; Arnold, Jennison, Pickard, Pollock, Redelings, Stealey, Thornton, Wilier, Worthington.

Membership Committee—Arnold, Tanner, Cleverdon.

Program Committee—Cornell, Thornton, Doria. Medico-Legal—Banks, Jackson, Lesem.

County Hospital—Kinney, Rees.

Child Welfare—Marjory Potter, Martha Welpton, Lillian Mahan, E. Blanche Ramer.

Committee for New Hospitals—Oatman, Churchill, Burger, Fox, Lewis.

Legislative Committee—Yates, Carrington, Harding, Worthington.

The annual meeting of the society for 1922, together with the San Diego County Dental Society, was held December 12, at the San Diego Hotel. A turkey dinner was served at 6:30 in the grill to which were invited the Commanding Officer of the Naval Hospital and his staff and the ladies of the medical and dental professions.

The entertainment of the evening, which consisted of a pleasing program of music, radio and the reports of the retiring officers, was given in the ballroom on the seventh floor, after which dancing was enjoyed until a late hour.

Things look bright at the present time for the inauguration of two or three new hospital movements in greater San Diego within 1923.

The first meeting of the New Year was held in Science Hall, Balboa Park, January 9. Besides the conducting of considerable miscellaneous business referred by the council, the following excellent program was presented:

1. Heart Disease from a new viewpoint, by R. K. Barry. This unique presentation of a vital subject was listened to with extreme interest, but from its very nature permitted of but little discussion. Barry is to be commended for holding the ideals of the heart specialist constantly before and above us in such a way as to invite a higher standard of our work along circulatory lines.

2. Malignant Disease from a Roentgenological Standpoint, by E. A. Blondin. This paper was profusely illustrated by lantern slides, disclosing chiefly cancers of the esophagus and stomach. The rich experience which Blondin has had in diagnosis and treatment of cancer of the esophagus makes one feel that this is a much more common seat of malignancy than ordinarily conceded. Many points of practical value from the roentgenologist's standpoint were brought out. This paper was discussed by Weiskotten, Pollock and Newman.

3. Pasteur's Contribution to Medical Science, by R. A. Kocher. The centenary of the birth of Pasteur was recognized in tribute to the work of this great scientist with a graphic portrayal of the strong points in the character and the outstanding accomplishments of this great scientist, the man to whom we owe in a large measure our start toward making of medicine an exact science.

St. Joseph's Hospital.—The Bulletin of the San Diego County Medical Society contains the following note:

"The annual election of officers was held two

weeks ago at the regular meeting of the staff of St. Joseph's Hospital. L. C. Kinney was elected president of the staff, A. B. Wessels, vice-president, W. W. Russell, secretary, and J. Jennison, member of the executive committee.

H. A. Thompson, M. C. Harding and C. E. Rees have been appointed members of the advisory committee to serve with the elected officers for the coming year.

The laying of the cornerstone for the new St. Joseph's Hospital has been postponed until March, 1923, on account of delay in completion of the plans.

SAN FRANCISCO COUNTY

San Francisco Medical Society (reported by J. H. Woolsey, secretary)—The committee on Medicine conducted the meeting of December 5 on the subject of "The Cults." Papers were read by Edward W. Twitchell on "Psychotherapy Cults," and J. T. Watkins on "Physical Therapy Cults."

The annual meeting was held December 12 and the following officers elected: President, Sol. Hyman; first vice-president, W. W. Boardman; second vice-president, Elizabeth Keys; secretary-treasurer, J. H. Woolsey; librarian, Leo Eloesser, Board of Directors: H. E. Alderson, Jos. Catton, Leo Eloesser, J. H. Graves, E. S. Kilgore, A. C. Reed, Emmet Rixford. Terms expire December, 1925. (Elected Dec. 1922.)

Delegates 1923-4

H. E. Alderson, L. H. Briggs.

Committees

Executive Committee—T. H. Kelly, chairman; Paul Castelhun, W. T. Cummins.

Committee on Admissions—O. F. Westerfeld, chairman; A. S. Musante, H. E. Ruggles.

Committee on Medicine—J. M. Read, chairman.

Committee on Surgery—L. D. Prince, chairman.

Committee on Industrial Medicine—R. W. Harbaugh, chairman.

Committee on Eye, Ear, Nose and Throat—E. F. Glaser, chairman.

Civic Committee—R. K. Smith, chairman; M. R. Gibbons.

Papers were read by J. H. Kelly on "The Clinical Significance of Thoracic Pain"; by J. W. Shiels on, "The Clinical Significance of Thoracic Fluid"; and by Saxton Pope on "Ishi, Last Yana Indian, and Stories of Hunts with the Bow and Arrow."

On December 19, the committee on industrial medicine furnished the program with, "Some Observations on Traumatic Dislocations of the Hip," by J. T. Watkins, and, "Results Following Experimental Excision of Joints with Special Reference to the Hip," by J. F. Cowan.

The following abstracts of papers presented at these meetings have been received:

"Psychotherapy Cults," by E. W. Twitchell. In early medicine the psychic element was the important one by reason of the inadequacy of material therapy. With the improvement of material therapy came a neglect of the mental, this being delegated to the priest.

The increasing complication of modern life has increased the relative frequency of nervous disease and necessitated more attention from the physician. Failure of some of the earlier regimes, such as the Weir-Mitchell treatment, to give sufficient heed to the emotions and the imagination. The war added an immense number of nervous persons to those already needing care. Coue, like all other lay therapists, fails to distinguish the case which might properly be treated by him from the one which he may irreparably damage.

There is need of a better foundation in psychology for the medical student and a more thorough training in psychiatry. If physicians do not pay more attention to the psychological side of medicine, many of their patients will continue to seek relief from some of the lay psychotherapists.

"The Clinical Significance of Thoracic Fluid," by J. W. Shiels—J. Wilson Shiels' remarks regarding the significance of thoracic fluid were couched in more or less axiomatic form. This due to the shortness of time allowed to the subject. He enlarged upon the clinical necessity of keeping the pulmonary attributes of extensibility ever in mind, during the physical examination of the respiratory system. He considers it a misdirection of clinical ability to contemplate thoracic fluid as always associated with a pleural pathology. He declared nearly all of the pulmonary diseases sooner or later present pleural effusion. He recognizes the necessity of differentiating transudates from exudates, but considers cyto-diagnosis misleading or unavailing, unless associated with other clinical facts. He then considered and enlarged upon the classification of purulent fluid utilized by him as a surgical indication. He emphasized that natural fluid absorption depended upon the integrity of the pleura, the nature of the effusion, the state of the circulation and the formation of enzymes, and of course, costal movement; stating that the more elastic the chest and the more the movement the easier the absorption. The higher the pressure the slower the absorption. That pleural pressure was seldom positive at high levels of fluid and that elastic chest walls controlled the degree of position pressure at low levels, thus accounting for the ease with which young children are able to contain and bear large amounts of fluid.

Shiels declared that an average fall of systolic blood-pressure of 20 mm. of mercury took place, but that it was not a serious complication unless the pleura was inflamed, and if the pleura was definitely inflamed, the possibility of circulatory collapse was always present, and the use of atropine was of value in such cases. He emphasizes the fact that all forms of pneumonitis, pneumonia, abscess, infarcts, embolism, tumors, malignant or otherwise, frequently gave early fluid in the pleural cavity, and that all of these conditions were as a rule demonstrated by a chronic inflammation of the lung, with dyspnoea, pain, fever, sputum, cough and effusion. He enlarged upon the difficulty in differentiating between supra and infra-pleuritic inflammation and its consequences. He warned his hearers against excluding appendicitis on account of right basal crepitations. He credited the X-ray with the teaching and education of clinicians in disorders such as intralobular pleurisy, mediastinitis, and supra and infra-pleuritic collections.

San Francisco Academy of Medicine—R. G. Hoskins, Professor of Physiology in Ohio State University, gave an address before the San Francisco Academy of Medicine on the 15th of January. Hoskins' subject was "Constructive Endocrinology."

The Work of Mary's Help Hospital of San Francisco for 1922—The Sisters of Mary's Help Hospital have just issued a little pamphlet giving a summary of the work of the institution during the past year. The hospital admitted 4087 patients and discharged 3880. There were 1784 operations, over 6000 laboratory examinations and 2270 X-ray services. 291 patients were treated in the hospital free of cost and 191 paid something, but less than cost. The ambulatory patient department rendered services to 12,007 patients, made 703 visits and filled 2946 prescriptions. Practically all of the patients treated in this department paid nothing at all. The Sisters expressed their gratitude for the splendid work of the staff and visiting physicians, whose generous co-operation made such an extensive amount of free work possible. The staff of the hospital is now well organized by departments holding regular meetings and making progress in every way in the betterment program in which they are actively engaged. Sister Zoe, R. N., is superintendent; A. S. Keenan is president of the staff, and N. J. Gottbrath secretary of the staff.

St. Joseph's Hospital Building Annex—The activities of construction are again evident at St. Joseph's

Hospital of San Francisco, the Sisters having signed a contract for the building of an annex to house the increased number of student nurses and, later, afford available rooms for patients, when the main structure is torn down, to make way for the second and principal concrete unit, rooms will be used in the annex, which will provide 48 beds.

The first fireproof unit was completed two years ago at an expense of \$150,000, and the next unit is to cost about \$350,000. When the new St. Joseph's Hospital is completed there will be available 300 beds on a site unexcelled for a general hospital. The location selected by the Franciscan Sisters of the Sacred Heart thirty-three years ago is free from noise, dust and smoke, an ideal condition for such an institution, and is, at the same time, accessible by street cars and automobiles, a beautiful boulevard leading to the doors.

The coming meeting of the American Medical Association, to be held in San Francisco, June 25 to 29, assumes a special importance to the staff of this progressive institution, on account of the subject of accrediting St. Joseph's Hospital for the interne year of medical graduates by the Council on Medical Education and Hospitals of this leading national association of physicians and surgeons.

SAN JOAQUIN COUNTY

San Joaquin County Medical Society (reported by Dewey R. Powell, secretary)—The annual meeting of the San Joaquin County Medical Society was held in the banquet room of the Hotel Lincoln, Friday evening, December 8. There were forty-seven members in attendance, which made it the largest gathering ever held under the auspices of the society. A most enjoyable repast was served, and the annual election of officers resulted in the following selections: President, Dewey R. Powell; first vice-president, L. R. Johnson; second vice-president, J. W. Barnes; secretary-treasurer, H. S. Chapman. The guest of the evening was Herbert C. Moffitt of San Francisco, who gave a most thorough and illuminating paper on "Intra-abdominal Tumors of the Left Upper Quadrant."

San Joaquin County Medical Society (reported by H. S. Chapman, secretary)—The regular monthly meeting of the San Joaquin County Medical Society was held in the State Hospital, January 12. R. T. McGurk presided in the absence of the president, D. R. Powell.

Those present were Dameron, Barnes, Lynch, Dozier, O'Donnell, McGurk, Holliger, Walker, Friedburger, English, Haight, Margaret Smythe, Sanderson, Chapman, and Blinn and Van Meter as guests.

Speakers of the evening were Emmet Rixford, Professor of Surgery, Stanford University Medical School and Ralph Scheier.

Emmet Rixford had as his subject "Appendicitis." He gave a very interesting resume of the early history of the disease, the early work done by Reginald Herbert Fritz, a Boston pathologist. He also spoke of the work done by W. W. Keen. He next discussed drainage tubes, fistula and diverticulitis. The paper was most interesting and all present went away feeling that they had learned something more about the appendix.

Second paper of the evening was by Ralph Scheier. He spoke on the importance of the early diagnosis of tuberculosis. He gave as the most important symptom or group of symptoms of the early diagnosis, as the constitutional symptoms. The instability of pulse and temperature are very indicative of an early tuberculosis, and even if the sputum is negative the patient should be carefully watched. One sputum examination is not sufficient, and at least ten should be made. Baccilli are frequently found in the tenth specimen. He also demonstrated the type of breathing. His outline of treatment is rest and more rest. Not so much where one lives

as how one lives, was his idea of climatic conditions. A very interesting discussion followed the paper.

SAN LUIS OBISPO COUNTY

San Luis Obispo County Medical Society (reported by G. David Kelker, secretary)—The December meeting of the San Luis Obispo County Medical Society was preceded by a dinner at the Hotel Andrews, with the following members present: Miller, Shields, Jackson, Bradbury, Mugler, Fossum and Nielsen of San Luis Obispo, and Dresser, Wilmar and Kelker of Paso Robles.

In addition to routine business to come before the society, the following officers were elected to serve during 1923: President, R. O. Dresser, Paso Robles; vice-president, O. B. Fossum, San Luis Obispo; secretary-treasurer, G. D. Kelker, Paso Robles.

The following standing committees were appointed by the retiring president, B. Y. Miller: Board of Censors, Bradbury, Mugler, and Wilmar; Auditing Committee, Wilmar, Dresser, and Kelker.

Headquarters of the new County Health Organization for San Luis Obispo County have been established at 1128 Garden street, San Luis Obispo. All classes of communicable diseases occurring in the county will be reported through that office. This organization is aided and fostered by the Rockefeller Foundation and is one of three being established in this State. Some of the important activities of such an organization are: Public health education, sanitation, control of communicable diseases, and adult and child hygiene.

SANTA BARBARA COUNTY

Santa Barbara Cottage Hospital Holds Annual Banquet in Connection with the Annual Clinic Day

—The clinics were divided into three major groups: eye, ear, nose and throat clinics, consisting of six different clinics by different physicians. The surgical clinic lasted throughout the day; the medical clinic started at noon and continued during the rest of the day. The program included a great deal of most interesting work of value to the cause of better medicine. The banquet was held in the evening at a local hotel. This is the second year for this combined clinic day and banquet. Franklin R. Nuzum was general chairman of the day; Samuel Robinson, chairman of the surgical section; Allen H. Williams, chairman of the medical section, and William J. Mellinger, chairman of the ear, nose and throat sections. The officers of the County Medical Society, S. J. Mellinger, H. L. Schurmeier, J. C. Cummings, W. T. Lucas and Alexander Soper, assisted in making this day one of interest to the profession and value to the community.

SANTA CLARA COUNTY

Santa Clara County Medical Society (reported by E. P. Cook, secretary)—The regular December meeting was held in the society rooms in the Twohy Building. The following officers were elected for the ensuing year: President, F. C. Gerlach; first vice-president, F. S. Ryan; second vice-president, R. G. Reynolds; third vice-president, Jonas Clark; secretary, A. J. Baiocchi; treasurer, H. C. Brown.

SONOMA COUNTY

Sonoma County Medical Society (reported by N. Juell, secretary)—The society held its regular meeting January 11 at Sebastopol with very good attendance, five visitors being present. Howard C. Naffziger addressed the society on the subject of "Head and Nerve Lesions." Elizabeth Emerson was accepted as a new member and G. S. Holman was admitted to membership by transfer from San Leandro, Alameda County. James H. McLeod discussed with the society the business transacted by the Council of the State Society, which met in San Francisco on January 6. The Sonoma County Society unanimously endorsed the proposed change in the Indemnity Defense Fund.

BOOK REVIEWS

Psychoanalysis. Its theories and practical application. By A. A. Brill, Ph. D., M. D., 3rd ed. 468 pages. Philadelphia and London: W. B. Saunders Company, 1922.

Two diagnostic sins are almost unforgivable. One is to mistake neurosis for organic disease, the other to mistake organic disease for neurosis. In at least fifty per cent of cases as they come, the mental condition of the patient is of vital importance to both diagnosis and treatment. It ought to be trite to say that every medical man ought to be thoroughly acquainted with neuroses.

The volume named above is the third edition of an already standard work. No single book gives as clear and compendious a statement of pure Freudian psychopathology. Anyone who would understand the neuroses must begin with Freud and there is no better way than to read this work by Brill. Of course Freud was only the beginner and his work has been extended by a host of others, most particularly by Adler and Jung, and it is a pity that Brill barely mentions these two. If one were to depend solely upon Freud in treating the neuroses, without making any use of what these others have added, he would be riding a lame horse indeed.

The only essential change made since the second edition is the addition of chapters on Homosexuality and on Masturbation, both of which should be of great value to every reader. J. L. W.

The Practice of Medicine. By A. A. Stevens, M. D., Professor of Applied Therapeutics in the University of Pennsylvania; Professor of Therapeutics and Clinical Medicine in the Woman's Medical College of Pennsylvania. Octavo of 1106 pages. Philadelphia and London: M. B. Saunders Company, 1922. Cloth, \$7.50 net.

In the preface of this, the first edition, the author makes it his purpose to present descriptions of the various internal diseases which accord as nearly as possible with the present state of our knowledge and which, though concise, shall contain the necessary information upon etiology, morbid anatomy, symptomatology, diagnosis, prognosis and treatment of these diseases. It is not his intention to enter upon controversial fields but he has attempted to indicate these fields where they exist and has supplied references to the medical literature in which the two sides of a question may be read.

The book is undoubtedly a valuable addition to the library of any physician. Its contents are fully up to date and the pictures of disease presented are excellent. The general plan of the book is very similar to Osler's "Practice of Medicine" and is not profusely illustrated. Reproductions of temperature charts, polygraphic and electrocardiographic tracings are used where necessary, but no other illustrations are used excepting some anatomical diagrams in the section on diseases of the nervous system. References to articles containing extensive bibliographies are given where the author thinks necessary.

The book should prove a satisfactory textbook for students and certainly will be a valuable addition to the working library of the busy practitioner. T. H. K.

X-Ray Dosage in Treatment and Radiography. By William D. Witherbee, M. D., and John Remer, M. D. 87 pages. New York: The Macmillan Company. 1922. Price, \$1.75.

A handy little manual. It will be as useful to the radiologist as the dosage table of drugs is to the general practitioner. L. E.

Hughes' Practice of Medicine. Including a section on mental diseases and one on diseases of the skin. 12th ed. By R. J. E. Scott, M. A., B. C. L., M. D. Illustrated. 810 pages. Philadelphia: P. Blakiston's Son and Co., 1922. Price, \$4.

A useful little ready-reference manual for the office desk or the automobile side-pocket, even though the therapeutic recommendations have a flavor of antiquity that recalls flapping saddle-bags and smelly decoctions rather than automobiles and hypodermic syringes. For diabetes insipidus "Galvanism applying one pole to the neck below the occiput, the other to the hypochondriac region is of value." To aid digestion in chronic gastritis . . . "pepsin, pancreatin, papoid, and bitters are of value." Never mind—the little book has a lot of good in it. It will please many a faithful doctor, many a corner druggist, and many an old-fashioned lady. L. E.

Dental and Oral Radiography. A text-book for students and practitioners of dentistry. By James D. McCoy, M. S., D. D. S., F. A. C. D. Professor of orthodontia and radiography, College of Dentistry, University of Southern California, Los Angeles. 197 pages. 116 illustrations. 3d ed. St. Louis: C. V. Mosby Company. 1922. Price, \$3.

Two of the three chapters on the technic of dental and oral radiography and the chapter on the interpretation of dental and oral radiograms are useful. The remaining nine chapters deal with the history of the X-Ray, with high tension currents, magnetism and other similar things. They are out of place in a specialized manual. If they were left out and the book reduced by three-fourths, it would be more to the point and more serviceable. L. E.

Treatment of Fractures. With notes upon a few common dislocations. By Charles Locke Scudder, M. D. Ninth Revised edition. 749 pages. 1252 illustrations. Philadelphia and London: W. B. Saunders Company. 1922. Price, \$8.50.

To the ninth edition of this old stand-by are added many new methods (and old methods revised) brought out during the war, especially methods of traction and splinting. It is a perennially helpful and trustworthy guide. L. E.

BOOKS RECEIVED

A Manual of Gynecology. By John Osborn Polak, M. D., Professor of Obstetrics and Gynecology, Long Island College Hospital; Professor of Obstetrics in the Dartmouth Medical School; Gynecologist to the Jewish Hospital; Consulting Gynecologist to the Bushwick, Coney Island, Deaconess', and Williamsburgh Hospitals, Brooklyn, and the People's Hospital, New York. Second Edition, thoroughly revised. Illustrated with 139 engravings and 10 colored plates. Lea & Febiger, Philadelphia and New York, 1922.

Feeding, Diet and the General Care of Children. By Albert J. Bell, M. D., Assistant Professor of Pediatrics in the Medical Department of the University of Cincinnati; Attending Pediatrician to the Cincinnati General Hospital, The Tuberculosis Hospital and the Christ Hospital. Illustrated. A book for mothers and trained nurses. Philadelphia: F. A. Davis Company, 1923.

Principles and Practice of Infant Feeding. By Julius H. Hess, M. D., Professor and Head of the Department of Pediatrics, University of Illinois College of Medicine; Chief of Pediatric Staff, Cook County Hospital; Attending Pediatrician to Cook County, Michael Reese and Englewood Hospitals.

Illustrated. Third edition, revised and enlarged. Philadelphia: F. A. Davis Company, 1922.

Diseases of the Ear, Nose and Throat, Medical and Surgical. By Wendell Christopher Phillips, M.D., Professor of Otology, New York Post-Graduate Medical School and Hospital; Surgeon to Manhattan Eye, Ear and Throat Hospital; Attending Otologist to the Post-Graduate Hospital and Babies' Wards. Sixth Revised Edition. 578 illustrations. Philadelphia: F. A. Davis Company, 1922.

Montaigne and Medicine. Being the Essayist's comment on contemporary Physic and Physicians; his thoughts on many material matters relating to Life and Death; an account of his bodily Ailments and Peculiarities and of his Travel in Search of Health. By James Spottiswoode Taylor, Commander, Medical Corps, U. S. Navy, M.D., Paul B. Hoeber, New York, Publisher.

Pulmonary Tuberculosis. By Maurice Fishberg, M. D. Clinical Professor of Medicine, University and Bellevue Hospital Medical College; Chief of the Tuberculosis Service, Montefiore Hospital for Chronic Diseases, and of Bedford Hill Sanatorium for Incipient Tuberculosis. Third Edition, Revised and Enlarged. Illustrated with 129 engravings and 28 plates. Lea & Febiger, Philadelphia and New York, 1922.

Tuberculosis and the Community. By John B. Hawes, M.D., Director, Clinic for Pulmonary Diseases, and Assisting Visiting Physician, Massachusetts General Hospital; Instructor, Graduate School of Medicine, Harvard University; Consultant in Diseases of the Lungs, New England District U. S. Veterans' Bureau. Lea & Febiger, Philadelphia and New York, 1922.

Physical Exercises for Invalids and Convalescents. By Edward H. Ochsner, M. D., President Illinois State Charities Commission; Attending Surgeon, Augustana Hospital, Chicago. Second Edition. St. Louis: C. V. Mosby Company, 1922.

An Introduction to the Practice of Preventive Medicine. By J. G. Fitzgerald, M. D., Professor of Hygiene and Preventive Medicine and Director Connaught Antitoxin Laboratories, University of Toronto; assisted by Peter Gillespie, M. Sc., C. E., M. E. I. C., and H. M. Lancaster, B. A. Sc., both of the University of Toronto, with chapters and appendix articles by various contributors. St. Louis: C. V. Mosby Company, 1922.

A Textbook of Minor Surgery. By John C. Vaughan, M. D., Director and Visiting Surgeon Beekman Street Hospital; Visiting Surgeon Sing Sing Prison Hospital; Consulting Surgeon Manhattan Eye and Ear Hospital; Former Visiting Surgeon Bellevue Hospital and Chief Vanderbilt Surgical Clinic and Instructor in Minor Surgery, Columbia Medical College, and Athel Campbell Burnham, M.D., Colonel in United States Army, in charge of Red Cross in Poland; former Instructor in Surgery in the Polyclinic Hospital; Former Attending Surgeon Vanderbilt Clinic. 459 engravings. Lea & Febiger, Philadelphia and New York, 1922.

Textbook of Pediatrics. Edited by Professor E. Feer, Director of the University Children's Clinic, Zurich. Translated and edited by Julius Parker Sedgwick, B. S., M. D., Professor of Pediatrics, University of Minnesota Medical School and Carl Ahrendt Scherer, M. S., Duluth, Minnesota. 262 illustrations. Philadelphia and London: J. B. Lippincott Company.

A Manual of Clinical Diagnosis by Means of Laboratory Methods for Students, Hospital Physicians and Practitioners. By Charles E. Simon, M. D., Lecturer in Medical Zoology, School of Hygiene and Public Health of The Johns Hopkins University, formerly Professor of Clinical Pathology and Physiological Chemistry in the University of Maryland Medical School and the College of Physicians and Surgeons, Baltimore. Tenth Edition, enlarged and thoroughly revised. Illustrated with 233 engravings and 23 plates. Lea & Febiger, Philadelphia and New York.

Premature and Congenitally Diseased Infants. By Julius H. Hess, M.D., Professor and Head of the Division of Pediatrics, University of Illinois College of Medicine; Chief of Pediatric Staff, Cook County Hospital; Attending Pediatrician to Cook County, Michael Reese and Englewood Hospitals; Consulting Pediatrician, Municipal Contagious Hospital and Winfield Tuberculosis Sanitarium, Chicago; Member of Advisory Board Children's Bureau, Department of Labor, Washington, D. C. Illustrated with 189 engravings. Lea & Febiger, Philadelphia and New York, 1922.

A Manual of Diseases of the Nose and Throat. By Cornelius G. Coakley, A. M., M. D., Professor of Laryngology and Otology in the College of Physicians and Surgeons, Columbia University; Attending Surgeon, Bellevue Hospital; Consulting Laryngologist and Otologist to the Presbyterian Hospital. Sixth Edition, Revised and Enlarged. Illustrated with 145 engravings and 7 colored plates. Lea & Febiger, New York and Philadelphia, 1922.

Getting Ready to be a Mother. A little book of information and advice for the young woman who is looking forward to motherhood. By Carolyn Conant Van Blarcom, R. N., formerly Assistant Superintendent and Instructor in Obstetrical Nursing and the Care of Infants and Children at the Johns Hopkins Hospital Training School for Nurses. With an introduction by J. Clifton Edgar, M. D., and Frederick W. Rice, M. D. Seventy illustrations. New York: The Macmillan Company, 1922.

Medical Diagnosis for the Student and Practitioner. By Charles Lyman Greene, M. D., formerly Lecturer in Applied Anatomy, University of Minnesota; Professor of Applied Anatomy and Instructor in Clinical Medicine, etc., University Hospitals; Attending Physician, St. Luke's Hospital and Miller Hospital; Consulting Physician, State Hospital for Crippled and Deformed Children, etc. Fifth edition, revised and enlarged. 14 colored plates and 623 other illustrations. Philadelphia: P. Blackiston's Son & Co.

Need for and the Value of Medical Organization—The president of a state medical society, during his year of service as the head of the organization, gets an insight into many matters which otherwise he might not get. Even though he has not previously thought much about organization and the many problems of economic importance to the medical profession, the state association president, while he is president, has an experience that largely increases his knowledge of such matters and greatly widens his viewpoints. He comes to know, if he has not previously known, that medical organization is essential; he learns, if he has not previously found out, that it is much easier to talk than to do, much easier to tear down than to build up; he discovers during his year of service, if he has not discovered sooner, that many times the loudest talkers are the poorest doers, and that an occasional failure upon the part of those "in authority" has been due to no especial fault, but rather to uncontrollable conditions and circumstances.

Pharmacology and Therapeutics

COUNCIL ON PHARMACY AND CHEMISTRY OF THE A. M. A.

(Reported by W. A. Puckner, Secretary)

The December report of the Council on Pharmacy and Chemistry notices a number of new remedies admitted to New and Non-official Remedies, as well as some interesting data about other remedies:

Arsenobenzol-billon—Powers, Weightman, Rosengarten.

NEW AND NON-OFFICIAL REMEDIES

Mercurialized Serum-Lederle for Intravenous Injection—Each package contains the equivalent of 1-3 grain (0.022 Gm.) of mercuric chloride in 8 cc. normal horse serum. The initial dose is 1-12 grain of mercuric chloride. This may be gradually increased to 1-3 grain. For a discussion of the actions, uses and doses of mercurialized serum, see New and Non-Official Remedies, 1922, p. 189. Lederle Antitoxin Laboratories, New York.

Silvol—A brand of protargin mild—N. N. P. (See New and Non-official Remedies, 1922, p. 326.) Silvol is a compound of colloidal silver with an alkaline proteid and contains about 20 per cent of silver. Parke, Davis & Co., Detroit. (Jour. A. M. A., Dec. 9, 1922, p. 2001.)

Arsenobenzol-Billon—A brand of arsphenamine—N. N. R. For actions, uses and dosage, see New and Non-official Remedies, 1922, p. 43. Arsenobenzol-Billon is marketed in ampules containing, respectively, 0.1, 0.2, 0.3, 0.4, 0.5, and 0.6 Gm. of arsenobenzol-billon (Jour. A. M. A., Dec. 16, 1922, p. 2085).

PROPAGANDA FOR REFORM

More Misbranded Nostrums—The following products have been the subject of prosecution by the Federal authorities charged with the enforcement of the Food and Drug Act: Simmons' Cough Syrup (A. B. Richards Medicine Co.), consisting essentially of ammonium chlorid, glycerin, chloroform, vegetable extracts, alcohol, sugar and water, flavored with anise; Hobbs' Nerve Pills (Hobbs Spanish-American Medicine Co.), consisting essentially of powdered iron, quinin, licorice, starch and traces of arsenic and strychnin; Mando Tablets (Garcey's Drug Store), containing extracts of nux vomica and damiana; Castleberry's Sexual Pills (Allan-Pfeiffer Chemical Co.), consisting of an iron compound, extracts of Spanish fly and nux vomica, chalk and sugar; Fackler's Compound Extract of Damiana, consisting of extract of plant drugs, including nux vomica, damiana and saw palmetto and also extract of Spanish fly, sugar, alcohol and water. (Jour. A. M. A., Dec. 2, 1922, p. 1949.)

Silicon in Tuberculosis—In Germany the use of preparations of silicon in the treatment of tuberculosis has been proposed on the assertion that silica was found in calcified tuberculous lesions and lung stones and that, consequently, silicon, as well as calcium, is an important element in the formation of the beneficial scar tissues whereby the lesions are healed. However, Maver and Wells, of the University of Chicago, find that the content of silica is no larger than one finds in comparable uncalcified tissues of adults. The use of silicon in therapy requires better evidence than is now available. (Jour. A. M. A., Dec. 2, 1922, p. 1935.)

More Misbranded Nostrums—The following products have been the subject of prosecution by the Federal authorities charged with the enforcement of the Food and Drug Act: Hebras Blood, Liver and Nerve Tonic (G. C. Bittner Co.), consisting essentially of epsom salt, a small amount of plant material, a trace of salicylic acid and water; Hull's Superlative Compound (A. J. Hull Medicine Co.), consisting essentially of extracts of plant drugs, including cinchona, a volatile oil, alcohol and water; Hull's

Superlative Liniment (A. J. Hull Medicine Co.), consisting of oils of cedar, thyme and probably wormwood, camphor and alcohol; Bristol's Sarsaparilla Compound (Lanman & Kemp, Inc.), consisting essentially of alcohol, sugar, potassium iodid and small amounts of extractives of vegetable drugs, including a laxative, and traces of a volatile oil; Kemp's Anacahuita Pectoral Compound (Lanman & Kemp, Inc.), consisting essentially of alcohol, sugar and small amounts of vegetable extractives, magnesium and ammonium salts. (Jour. A. M. A., Dec. 9, 1922, p. 2021.)

Neutral Acriflavine in Septicemia—Neutral acriflavine has been used intravenously in septicemia and similar conditions, but the available evidence does not demonstrate the value of the drug in these conditions. Also, the available evidence is insufficient to judge whether the intravenous use of the drug has dangers other than those inherent in intravenous medication. (Jour. A. M. A., Dec. 3, 1922, p. 2023.)

The Propaganda for Reform in Esthonia—Physicians the world over have long recognized that the claims for proprietary medicines put forward by those who are financially interested in sale are always over-optimistic, often unwarranted and not infrequently deliberately misleading and fraudulent. It is natural, therefore, that the widespread significance of the work of the Council on Pharmacy and Chemistry of the American Medical Association should have attracted the attention of the medical profession of all civilized countries and suggested the inaugurating of similar reform. An institute for drug control has been established in the Netherlands. Efforts toward the establishment of bodies patterned after the Council of Pharmacy and Chemistry have been reported in the past from Germany, Italy and Belgium. Now comes a message from Esthonia—formerly a Baltic province of Russia, but now an independent state—that the achievement of our Council is an incentive toward the inauguration of similar work in that country. (Jour. A. M. A., Dec. 9, 1922, p. 2030.)

"Esterol" Not Admitted to N. N. R.—"Esterol" is the proprietary and non-descriptive name under which the firm of Frederick Stearns & Co. markets benzyl succinate. Benzyl succinate has been admitted to New and Non-official Remedies. Its properties are similar to those of benzyl benzoate, but being insoluble it is almost tasteless and does not produce gastric discomfort. The Council on Pharmacy and Chemistry declared the proprietary brand of benzyl succinate sold as "Esterol" inadmissible because: (1) Stearns & Co. are neither the discoverers of the product nor of the therapeutic properties, and therefore are not entitled to apply a proprietary name to the product; (2) the labels of the trade packages contain recommendations for the use of esterol in dysmenorrhea, asthma, colic, hiccup and thus advertise it indirectly to the public. (Jour. A. M. A., Dec. 16, 1922, p. 2102.)

Cluttering Up Pharmaceutical Nomenclature—Esterol is Frederick Stearns & Co.'s proprietary name for benzyl succinate. The product per se is unobjectionable. The fundamental objection to esterol and the chief reason for its non-admission to New and Non-official Remedies is its name. A multiplicity of names for any one medicinal substance is against the interests, not only of scientific prescribing, but also of public welfare. When acetanilid was first introduced under a thousand and one names, cases were reported in medical literature of physicians calling for acetanilid under two or more names in the same prescription. More recently there was the ridiculous duplication of names for hexamethylenamin. Later yet came the even greater duplication in the case of phenolphthalein. Had Stearns & Co. been content to market their brand of benzyl succinate as benzyl succinate-Stearns, the product, as far as the name is concerned, would have been acceptable for New and Non-official Remedies. Such a name would give the firm any legitimate protection which it should desire and at the same time

give physicians full information about its composition. (Jour. A. M. A., Dec. 16, 1922, p. 2090.)

More Misbranded Nostrums—The following products have been the subject of prosecution by the Federal authorities charged with the enforcement of the Food and Drugs Act: Allen's Ulcerine Salve (J. P. Allen Medicine Co.), consisting essentially of lead soap and linseed oil; Ward's Celebrated Liniment (Dr. Ward's Medical Co.), consisting of alcohol, soap, sassafras oil, extract of red pepper and colored water; Ward's Lung Balsam (Dr. Ward's Medical Co.), consisting of chloroform, menthol, tar, ipecac extract, ammonium chlorid, sugar, alcohol and colored water; Ward's Kidney and Bladder Remedy (Dr. Ward's Medical Co.), consisting of extract of bearberry and cascara sagrada, sodium phosphate, sodium acetate, alcohol and water sweetened with saccharin and flavored with lemon oil; Ward's Sarsaparilla Compound (Dr. Ward's Medical Co.), consisting of sarsaparilla extract, anise oil, sassafras oil, a trace of potassium iodid, alcohol and colored water; Ward's Kidney and Backache Pills (Dr. Ward's Medical Co.), consisting of methylene blue, bearberry, digitalis, aleos, a trace of buchu and an aromatic oil; Durand's Swiss Herb Tea (Durand Medicine Co.), consisting of a mixture of plant drugs, including senna, fennel seed, orange peel, licorice root, juniper berries, althea root, sassafras bark, lavender flowers, buckthorn bark, red clover tops and saffron.

Ferraline (Ferraline Medicine Co.), consisting essentially of iron sulphate with other iron compounds and water; Crab Orchard Mineral Water (L. H. Goodwin & Co.), a highly mineralized water, the dissolved mineral matter consisting chiefly of Glauber's and Epsom salts (Jour. A. M. A., Dec. 16, 1922, p. 2103).

Absorbine Jr.—A liniment almost identical in physical appearance may be made from the following formula: Oil of wormwood, 1 dram; oil of sassafras, 26 minims; menthol, 15 grains; acetone, sufficient to make 11 drams (Jour. A. M. A., Dec. 23, 1922, p. 2184.)

Collene Not Acceptable for N. N. R.—Collene (Collene Laboratories, Inc., New York) is said to be a solution in distilled water of 0.05 per cent of colloidal silver in the metallic state. Many sweeping statements are made of superiority and therapeutic value of collene, but they are based on no adequate evidence. Aside from the general misleading tenor of the advertising, the Council on Pharmacy and Chemistry found, when it took up the consideration of collene, discrepancies between facts and claims. The Collene Laboratories claimed 0.05 per cent of colloidal silver, while the Council's examination showed that, in effect, the silver content of collene was not colloidal, but ionic. The ionic content of collene indicates that the antiseptic effect of collene is of similar origin to that of silver nitrate and not to its alleged colloidal nature. In view of the ionic silver present, the claimed non-toxic effects are inherently improbable.

Instead of being acid free, as claimed, collene has a slight acidity and this may be responsible for its irritant effects on sensitive tissues. The Council declared collene not acceptable for New and Non-official Remedies because its composition is not correctly declared and because of the extravagant and misleading tenor of the advertising (Jour. A. M. A., Dec. 23, 1922, p. 2181).

More Misbranded Nostrums—The following products have been the subject of prosecution by the Federal authorities charged with the enforcement of the Food and Drugs Act: Lungardia (Lungardia Co.), consisting essentially of kerosene oil, turpentine oil, cassia oil, clove oil, extract from a laxative plant drug, sugar, gum, alcohol and water; Garrin's Blood Purifier and Tonic (Garrin Medicine Co. and Asheville Medicine Co.), consisting essentially of alcohol, glycerin, sodium benzoate and water with extracts of plant drugs, including golden seal; Deer Lick Spring Water (California Medicinal Springs

Co.), water containing mineral matter consisting chiefly of chlorids of sodium, magnesium and calcium, sulphate and bicarbonate of calcium, and sulphid of sodium; Lee's Hazel Antiseptic Cones (Hazel Hygienic Co.), perfumed suppositories composed of boric acid, sodium salicylate, a trace of zinc salt and cacao butter (Jour. A. M. A., Dec. 23, 1922, p. 2182).

Hayes Asthma Remedy—This preparation is exploited by P. Harold Hayes, Buffalo, N. Y. Some years ago, six of the seven remedies were examined. The analysts reported one, a cough medicine, to contain oils of turpentine, peppermint, etc., emulsified and sweetened. A second contained potassium iodid. A third preparation was reported to contain potassium, sodium and ammonium iodid. A fourth preparation contained iron peptonate. A fifth preparation consisted of capsules containing quinin sulphate. A sixth preparation consisted of pills which contained as their active constituent resin of jalap (Jour. A. M. A., Dec. 30, 1922, p. 2248).

Two Electronic Diagnoses of Abrams—Instead of the blood of a patient, a physician sent the blood of a guinea pig to one J. W. Eisiminger, of Oklahoma City, who operates a physico-chemical laboratory for the electronic reactions of Abrams. Eisiminger is an osteopath. The report received by the physician on the patient, whose history was sent in, reads as follows:

"Congenital diminished resistance, cerebro-spinal and digestive strain, 39 ohms. Metastatic Carcinoma, 6 Liver and right colon, Tuberculosis Genito-urinary tract, 6 ohms. Colisepsis, 4 ohms. Streptococci, infection, 12-25 ohms. in gall bladder region."

Another physician states that he sent Eisiminger some sheep's blood on blotting paper with a blank supposedly for a 15-year-old boy. This physician received the following diagnosis:

"Congenital diminished resistance cerebro-spinal strain 38 ohms. Metastatic carcinoma of left lung and pancreas, 8 ohms. Neisserian infection genito-urinary tract, eyes, 4 ohms. Tuberculosis of genito-urinary tract, 4 ohms."

However, it is possible that these blood specimens were not taken in subdued light and that Eisiminger was not informed if the subjects had red hair nor of their religious faith—factors which are said to play an important part in diagnoses made by the Abrams method (Jour. A. M. A., Dec. 30, 1922, p. 2247).

Nuforal—This number of the Journal carries an article by William C. Voorsanger on "Tuberculosis." Among other methods of treatment having a certain amount of following mentioned by Dr. Voorsanger is that of Nuforal. It is the purpose of this note to call to the attention of the members of the medical profession the fact that Nuforal has not been accepted by the Council on Pharmacy and Chemistry of the A. M. A. Physicians interested in data, in addition to that published in current medical Journals, regarding this alleged remedy of tuberculosis are advised to correspond with the secretary of the Council on Pharmacy and Chemistry of the A. M. A.

AGAIN "PROPRIETARY MEDICINES AND THE DOCTOR"

Twice recently we have called attention to the way in which the mails of physicians, and both medical and lay editors have been flooded with reprints of a paper by one Irwin G. Jennings, who was giving "Vital Reasons Why the Medical Profession and the Medicine Man Should Pool Their Ideals and Work Together to Benefit Humanity." The paper in question appeared originally in the official organ of the Glass Container Association which, of course, is interested in the bottle business. The author of the paper was described as a "judge" and a "lawyer," although the fact was not brought out that he was the editor of the Glass Container.

MEDICAL ECONOMICS

Why not let our advertisers help you?

Aid to a State Medical Journal—The St. Joseph's Hospital staff organization, Bloomington, Ill., has passed a resolution setting forth an agreement to purchase supplies and equipment of advertisers in the Illinois Medical Journal.

Stanford Medical School Offers Special Work to Physicians—The attention of readers of the Journal is called to the card from Stanford Medical School in the advertising columns of this issue. This offer of graduate instruction by an accredited institution of learning constitutes the first step toward the accomplishment of a very necessary and worthwhile service. Many physicians who are located away from the centers of medical education and research undoubtedly will avail themselves of the opportunity to spend a limited period of time in the departments of instruction in which they are most interested. A few weeks of this kind of intensive application to review of medicine in association with those whose business it is to teach will prove of immense value not only to physicians themselves but to the community as a whole.

Orthopedic Appliances Service Changes Offices—It will be noticed in the card carried by E. H. Markel & Company, Orthopedic Appliances, that they have moved from 1138 Mission street to 546 Jones street. This company deals in all forms of mechanical orthopedic appliances. They have recently enlarged the firm by the addition of more skilled workers.

Insurance—In these days when the insurance companies are offering the greatest varieties of protection to individuals or organizations, it is well for the physician to think seriously of his own protection and the protection of his family.

Some companies insure the fingers of a famous violinist or the feet of Charlie Chaplin. Others will protect a baseball club if the home-run king is indisposed, or in a world series will insure the club from loss due to the elements. Automobiles and their owners may be protected from fire, theft or accident to themselves or to others.

The physician should be cognizant of the value and the necessity of protecting himself and his family. Every physician, as an examiner, has had occasion to reject some man because he neglected to consider insurance until the strain of modern life had forced his blood pressure above normal limits, had brought albumin or sugar in his urine, or had developed in his heart either a murmur or an irregularity.

With these cases constantly recurring, the physician should be foresighted, especially when he realizes that his income is entirely dependent on his own efforts. Too often, however, is the story told of this physician who develops some acute condition that carries him off, leaving his widow with but little resources outside of the bills, which, if he lived, would have been paid, but which, after his death, are forgotten or disputed by the one-time grateful patients.—Editorial, Rhode Island Medical Journal, January, 1923.

Popular Medical Lectures—Stanford University Medical School announces the annual series of popular medical lectures to be held in Lane Hall, Sacramento Street near Webster, as follows:

"The Problem of the Delinquent Child," by Mr. J. C. Astredo, February 9.

"The Care of the Dependent Child," by Miss Katherine Felton, February 23.

"Modern Views on Dental Hygiene in Childhood," by Guy S. Millberry, D. D. S., March 9.

San Francisco's Health Program for Children: "The Medical Aspects," by William C. Hassler, M. D.

"The Educational Aspects," by Mrs. C. W. Hetherington.

DEATHS

Craig Thornton. Died at Woodland, December 20, 1922, age 77. He was a graduate of McGill University, Montreal, and came to Yolo County to begin his practice. He was a member of the Yolo County Medical Society, the State Medical Society and the American Medical Association.

Dozier, William E. Died at Susanville, Lassen County in November, 1922, age 58. He graduated from the Medical Department of the University of Virginia in 1883 and was licensed in the State of California in 1884. Doctor Dozier was a member of the Lassen County Medical Society, the State Medical Society and the American Medical Association.

Hitchcock, William Wesley. Died at Los Angeles, December 17, 1922, age 68. He was a graduate of Rush Medical College, Chicago, 1879 and the Bellevue Hospital Medical College, 1881. Licensed in California in 1887. Doctor Hitchcock retired from practice ten years ago to become the medical director of the Occidental Life Insurance Company. He was a member of the Los Angeles County Medical Society, the State Medical Society and the American Medical Association.

Hollis, John Claude. Died at Oakland, December 20, 1922, age 42. He was a graduate of the University of Illinois, taking a post graduate course at the University of London in 1914. Doctor Hollis spent several years in the practice of medicine in Cuba, coming to Pleasanton, California, in 1918 where he remained until 1921, at which time he located in Oakland. He was a member of the Alameda County Medical Society, the State Medical Society, the Cuban National Medical Association and the American Medical Association.

Huff, Samuel Gaston. Died at Santa Ana, December 16, 1922, aged 78. Graduate of St. Louis Medical College 1870. He practiced in Nebraska until 1880, then came to San Bernardino, where he became one of the valley's well known physicians, and in 1897 was placed at the head of the County Hospital, continuing in that position until his retirement about 15 years ago, when he moved to Huntington Beach. He was a member of the American Medical Association.

Robinson, Louis Sydney. Died at San Diego, December 17, 1922, aged 49. Graduate of the Medical School of Harvard University, 1901. Doctor Robinson came to San Diego on sick leave last June from Fort Bayard, New Mexico. He was an authority on tuberculosis and held the rank of major in the United States Public Health Service. He was a member of the Colorado State Medical Society and the American Medical Association.

Brooke, Sarah. Died at Atascadero, January 4, 1923, aged 80. Graduate of Woman's Medical College of Pennsylvania, Philadelphia, 1874. She retired from practice several years ago, coming to Atascadero, where she made her home. Dr. Brooke was a member of the American Medical Association.

Dake, Walter Marshall. Died at San Diego, December 14, 1922, aged 67. He was a graduate of Hahnemann Medical College and Hospital of Philadelphia, 1877. Dr. Dake came to California from Denver, where he had been in the practice of medicine for a number of years. He was a member of the Colorado State Medical Society and the American Medical Association.

Goodspeed, Isaac R. Died at San Mateo, December 28, 1922, aged 91. Graduate of Bowdoin Medical School, Portland, Maine, 1854. He was licensed in California in 1876 and a member of the American Medical Association.

California State Journal of Medicine

OWNED AND PUBLISHED MONTHLY BY THE MEDICAL SOCIETY OF THE STATE OF CALIFORNIA

BALBOA BUILDING, SECOND AND MARKET STREETS, SAN FRANCISCO

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VOL. XXI

MARCH, 1923

No. 3

ORIGINAL ARTICLES

RESPONSIBILITY FOR STATEMENTS AND CONCLUSIONS IN ORIGINAL ARTICLES

The author of an article appearing in the JOURNAL is entirely responsible for all statements and conclusions. These may or may not be in harmony with the views of the editorial staff. Furthermore, authors are largely responsible for the language and method of presenting their subjects. All manuscripts will be carefully read, but editorial privileges will be exercised only to a very limited extent. It is believed that the manner of presentation of any subject by any author determines to no small degree the value of his conclusions. Therefore, both the author and the reader, in our opinion, are entitled to have the subject as presented by the author as little disturbed as possible by the editors. However, the right to reduce or reject any article is always reserved.

PASTEUR'S CONTRIBUTION TO CHEMISTRY

By CARL ALSBERG

From the Food Research Institute, Stanford University

When Lewis Carroll wrote "Through the Looking Glass," describing what Alice saw in "Looking Glass House," where, as Alice says, there is a drawing room "that's just like our drawing room only the things go the other way," and where there are "Looking Glass Books" that Alice could read only if she held them up to a glass so that "the words will all go right again," he turned one of Louis Pasteur's greatest discoveries into a deliciously whimsical fairy tale. Pasteur it was who discovered the looking glass world of matter in which each substance has its looking glass counterpart; and this was a very great discovery for it proved that atoms are arranged in definite patterns in the molecule and that often this arrangement is not symmetrical. It led to the development later by LeBel and by Van't Hoff of the theory of the asymmetry of the carbon atom, to the idea that atoms in the molecule occupy three dimensions—in fact to the whole science of stereochemistry. Pasteur is the father of stereochemistry, the science of the arrangement of atoms in space. The concepts of stereochemistry have been immensely fruitful, both in the physical and in the biological sciences.

That some substances like quartz crystallize in two forms, one of which is the mirror image of the other, was known before Pasteur began work. That if a ray of polarized light be passed lengthwise through such crystals, its plane is rotated by one type of crystal to the right, by the other to the left, was also known.

That some substances like sugar or tartaric acid rotate polarized light when in solution was also known before Pasteur's researches, and this was supposed to be due to some property of the molecule itself. What this property of the molecule was remained unknown. Pasteur showed that it was the asymmetrical arrangement of the atoms in the molecule. By this he meant that the arrangement was such that in no conceivable way could the molecule be divided into equal and identical parts. One side is always lopsided as compared with the other.

He presented much evidence in support of this theory but the most convincing was his work upon racemic acid. This is a form of tartaric acid which crystallizes neither in right-handed nor in left-handed crystals. Its crystals are all symmetrical. Its solutions do not rotate polarized light. Pasteur succeeded in separating it into two acids, one crystallizing in right-handed crystals, the other in left-handed crystals, like Alice's real and "looking glass" books. Properly oriented, the right-handed form turns light to the right, the left-handed form to the left. One is the mirror image of the other, just as the image of your right hand when you hold it up to the looking glass is always a left hand. Moreover, when Pasteur dissolved the two acids in water in equal proportions, the solution no longer affected polarized light. The two acids, rotating light as they do equally in opposite directions, nullify the action of one another. When Pasteur caused the mixture to crystallize, he obtained again the symmetrically crystals of racemic acid with which he began.

Now one of the two tartaric acids that Pasteur separated from racemic acid is identical with the tartaric acid found in the cream of tartar of grapes. Pasteur recognized that practically all substances found in nature with an asymmetric structure are the product of life. He therefore imagined protoplasm itself to consist of or contain substances of an asymmetric molecular structure. He speculated much concerning how this has come about. He assumed that although the earth is a sphere, at least approximately, sunlight does not act symmetrically upon the surface of the earth,

but always in one direction, because the earth turns always in the same direction upon its axis. Now all life derives its source of energy from the sun. Therefore Pasteur imagined that it is the asymmetric way in which the rays of the sun act upon the surface of the earth that is responsible for the asymmetric action of living things. He performed many experiments to test this hypothesis, however, without success. Up to the present day no one has been able in a conclusive manner finally to imitate the asymmetric action of protoplasm in the synthesis of organic substances.

As just indicated, Pasteur began with research in crystallography, as far away as is perhaps conceivable from biology. It may seem a far cry from crystallography to biology and to the study of disease, but every step in Pasteur's road from crystallography and the inanimate to biology and the organized was logical and the direct development of previous work. In considering the evolution of Louis Pasteur from a mineralogist and crystallographer to perhaps the first biologist of his time, we must remember that in the first half of the last century the sciences dealing with the inorganic and inanimate were not separated sharply from those dealing with the organic and living. There was not that clear division between the physical and biological sciences with which we are familiar today. Many of the phenomena which today we recognize as biological, then were regarded as purely chemical, for the simple reason that very little indeed was known about micro-organisms. That in alcoholic fermentation, for example, the conversion of sugar into alcohol and carbonic acid was the expression of the metabolism of micro-organisms was not known. Fermentation seemed to the scientists of those days a purely chemical phenomenon. To be sure micro-organisms had been discovered by the great Dutch microscopist Leuwenhoek, but that micro-organisms are responsible for many of the profound changes organic materials undergo in nature was quite unsuspected except by a few botanists—especially Cagniard Latour and Schwann. Their ideas had made but little headway for they were merely botanists, and what right had botanists to pass on purely chemical phenomena? Such being the state of scientific opinion, it is evident that the evolution of Louis Pasteur from a crystallographer to a biologist and pathologist meant a less violent revolution than a corresponding change in a man's career would mean today. This we must keep in mind in order to understand his scientific development.

We have already seen how Pasteur's crystallographic work upon asymmetric crystals brought him into the fields of biological phenomena. The same study brought him directly into the field of fermentation, one of the battlegrounds of science of his time. He came to study fermentation as a continuation of his work upon asymmetry. In lactic acid fermentation and to a less degree in alcoholic fermentation amyl alcohol is formed. Fermentation amyl alcohol is optically active, that is to say, it rotates the plane of polarized light passed through it. The formation of an optically active substance in fermenta-

tion was difficult for Pasteur to explain, on the basis of the Liebig hypothesis of fermentation then prevailing. The Liebig hypothesis was a purely chemical one in that it assumed that fermentation was merely the decomposition of sugar and in that it left no room for the intervention of living forms. Now Pasteur had learned that whenever he decomposed even to a slight degree an optically active substance, it lost its optical activity, that is to say, its asymmetric structure. If Liebig's hypothesis of fermentation was correct, it was difficult to conceive how an optically active substance such as sugar could be decomposed into other substances which like amyl alcohol retain some of the optical activities of sugar. This was entirely contrary to Pasteur's experience with optically active substances. He therefore regarded the origin of this alcohol as more profound than called for by the Liebig theory of fermentation. Recalling the fact that life alone is capable of creating full-fledged new asymmetry and thinking that his objection would no longer have a basis if between the sugar and amyl alcohol a living organism was interposed, Pasteur found himself led quite naturally to regard fermentation as a vital action and to range himself upon the side of the so-called vitalists, Cagniard Latour, Schwann and others. His study of lactic fermentation led him to the discovery of the lactic acid bacteria and to the proposal of the hypothesis that fermentation in general is merely the expression of the vital activity of living forms and to regard the organic matter which is decomposed in fermentation merely as food for the ferment. It is evident therefore that Pasteur's scientific evolution was perfectly logical when he advanced from crystallographic studies to the investigation of fermentation. Each other phase of his career was as logical; but these later phases will be dealt with by the other speakers of the evening.

Court Decisions—The United States Supreme Court upholds vaccination in the case of *Zucht vs. King*, says the National Health Legislative Summary of recent date. "In an opinion delivered November 13, 1922, too late to get into our Court Decisions Number (Statement No. 37), the United States Supreme Court upheld again the right of a city to require vaccination as a prerequisite for attending school. The *Zucht* girl was excluded from a public school in San Antonio, Texas, because she was unvaccinated. She brought an injunction against enforcement of the local ordinances, asked a writ of mandamus to compel her admission to school, and also asked for damages. A judgment against her was affirmed by the Court of Civil Appeals for the Fourth Supreme Judicial District of Texas, and an application for writ of error to the Texas Supreme Court was denied. Writ of error was granted to the U. S. Supreme Court, the error assigned being that the due process and equal protection laws of the Federal Constitution had been violated. The court stated that it has long been held to be within the police power of the State to require compulsory vaccination and that power can be delegated to municipal authority.

Quoting further from this summary we read: "The Federal Maternity and Infancy Act has not yet been argued before the Supreme Court in the case of *Massachusetts vs. Mellon*, et al., which is pending. The return is set for January 2, 1923."

SOME OF THE FUNDAMENTAL CONTRIBUTIONS OF PASTEUR TO BACTERIOLOGY.*

By W. L. HOLMAN, M. D., Palo Alto

From the Department of Bacteriology and Experimental Pathology, Stanford University Medical School

Dr. Alsberg has shown you the road by which Pasteur entered bacteriology—the road of chemistry. The last two speakers will tell you about the sensational discoveries that crowned his work, and which immortalized him. Dr. Fitzgerald has for you the story of Immunity against Anthrax, and Dr. Kellogg the discovery of the treatment of rabies which carried his name all over the world, and led to the establishment by international subscription of the Pasteur Institute.

It might be thought that without this rich material I would find comparatively little to say, but such is not the case. My regret is that I have only a bare fifteen minutes in which to sketch for you from the tremendous canvass of his life a little picture that may tell you something of what it was. I am afraid there will be many lines drawn too faintly and others crude and blurred, but you must bear with me because the subject is a very wonderful one.

Two startlingly new biological facts were given to science in his early work in bacteriology. The first was that of life without air—the discovery of the anaerobic bacteria—destined to play such an important role in the history of bacteriology. It began in 1861 with the discovery of the butyric acid vibrio, and was followed by his finding the vibrio septique, as a result of which “there disappeared, with one wave of the wand, the greatest of the objections to the new etiology of anthrax.” In his study of the septic vibrio, he tells us things that are as new as the late war. In 1878 Pasteur knew of its presence in the soil, a fact so disastrously demonstrated in the trenches of France and Belgium; he knew of its being in the intestines, and its growing out into the tissues; he knew of wound infections, and in discussing treatment, after proposing “to wash the wound unceasingly with common aerated water, or to flood the surface with atmospheric air” as “the best means of preventing death,” he adds: “Furthermore, under these conditions, one might expose the surface of the wound to air heavily charged with the germs (spores) of the septic vibrio, or wash it with water, holding in suspension billions of these germs without producing the least septicemia in the patient. But, under similar conditions, let a single clot of blood, or a single fragment of dead flesh, lodge in a corner of the wound sheltered from the oxygen of the air, where it is surrounded by carbonic acid gas, even though it might be over a very small area, and beginning at once the septic germs will give rise, in less than twenty-four hours, to an infinite number of vibrios multiplying by fission and capable of causing in a very short time a mortal septicemia.” This is

what it took the surgeons in France over two years to learn, and contains the germ of the most modern views and methods of treatment.

The second new and equally astonishing fact was that of the resistance of bacteria to the temperature of boiling water. This was discovered during the discussion of spontaneous generation, and was a necessary fact for the solution of that important problem. It became essential for the logical development of his work, that this question should be finally closed. In his study of fermentation, Pasteur learned that spontaneous generation could not be. A great deal had been done on this subject before him, and it looked like a hopeless confusion to the scientists of the day. It is rare that the human mind sees simply, but Pasteur's did. His friends pleaded with him. “You will never find your way out,” cried his close adviser, Biot. “I shall try,” replied Pasteur modestly. Dumas warned him, “I would advise no one to dwell too long on such a subject.”

Perhaps Pasteur's greatest contribution to bacteriology, and to all related sciences, was this supreme confidence in the experimental method of attack. There is no time to tell you, even briefly, the brilliant story of Pasteur's success. Out of it came all our most important methods of technique; the use of the autoclave; the means of pasteurization; the flaming of our instruments and glassware; the importance of the reaction of culture media and the relation to oxygen; the Chamberland filter; the fertile idea that germs could exist in a living state and not develop; and lastly, the significance of resistant spores.

It is interesting and profitable to recall that many of the greatest of these established facts resulted from the continuous attacks on his work by Bastian, who died in 1915 still believing in spontaneous generation, and whose son continued the arguments in a series of letters in the London Lancet as late as 1919. The greatest thing about this sharp and agitated discussion was the excellent preparation it gave Pasteur for the combats to come.

I wish I might fill in the details of his growth until he came to fulfill the prediction of Robert Boyle, made 200 years before, that “he who could probe to the bottom the nature of ferments and fermentations, would probably be more capable than anyone to explain certain morbid phenomena.” The results, marvelous as they are, give but a poor picture of the thrilling days in the laboratories when they were being laboriously worked out.

He devoted six years to the study of the diseases of silk-worms, and in after years he advised young medical students who learned the path to his laboratory to read his two volumes on the subject, for the great teachings of microbial pathology are already found there. He began by being deceived, but was led back continuously to the truth by experiment, and ended by unraveling all the obscurities. To put it shortly, he saved the silk industry of France and the world, and demonstrated anew the tremendous value of experimental research. At first he confused two separate diseases, and what he learned in finding himself,

* Read at the January meeting of the San Francisco County Medical Society.

made of him the one man in the world of science trained to grasp the opportunities of the future. He learned about parasitism; the difference in receptivity to germs in different individuals of the same species; the augmentation of virus by animal passage; the importance of the routes of infection; and he laid the foundation for the experimental study of contagion and heredity.

Pasteur was soon called upon to settle, or to help to settle, the question of the transformation of one species into another. This was really a remnant or outgrowth of the spontaneous generation beliefs, and is not yet completely purged from scientific circles. Pasteur began with an error, and he loved to cite it as an example of the ease with which the least preconceived idea leads even the most alert observer into error. "I have once had occasion to believe in the transformation of one organism into another, in that of the mycoderma vini or cerevisiae into yeast," he says, "and this time I was in error. I did not know how to avoid the cause of error which my justified confidence in the germ theory had led me to discover so often in the observations of others."

It is pleasing to recall here the letter written to Lister in which this same subject appears. This letter dated February 27, 1874, is in reply to one from Lister, the one which gratified Pasteur so much that he quoted it in his book on the fermentation of beer, published in 1876. Lister had referred to a study of his own, in which he believed a transformation had occurred, and Pasteur at once fixed upon the weak point in the chain of evidence, and after outlining an experiment to demonstrate this, he says, "Your method of culture is remarkable for its exactitude and for the appreciation it shows of the difficulties of this class of studies, but I venture to tell you that I could wish it were more vigorous still, and to be more sure about the purity of your sowings. I should like to go on, but writing soon fatigues me. In the month of October, 1868, I was struck with paralysis of the left side, and I have only half recovered from this terrible shock. My head can only stand, at one time, a limited dose of effort and work. Bending my head especially when I write is very painful to me. But I leave you with regret."

It is hardly appreciated that Pasteur did his most remarkable and famous work after a catastrophe that so often marks the end of life's activities. This disbelief in bacterial transformation did not, however, prevent Pasteur from recognizing marked variations in function and morphology of micro-organisms under varied conditions of growth.

When Pasteur took up the studies of the etiology of microbial diseases in animals and man, he was well armed for the contest, and the results showed the value of his self-developed training.

In reviewing the beliefs up to the time of Pasteur, one must be careful not to misinterpret the terms found in the literature. Henle had theoretical views which somewhat foreshadowed the theory established by Pasteur, but Henle looked upon the germ as something belonging to the sick person, borrowing from him a sort of pathological vitality;

but nothing is to be found of the new idea brought by Pasteur concerning the living virus which can be cultivated and modified outside of the organism. Virchow's views explained disease by the anatomy of the tissues. Every pathological modification was only a physiological transformation developing in an organ which could not endure it, or at a time when it was abnormal. Parasitic organisms were taboo at this time.

The history of anthrax illustrates with what a clear vision Pasteur approached a difficult subject. Our knowledge of the bacillus of anthrax began in 1850, when little rods were seen by Davaine in the blood of anthrax cattle. In 1855 Pollender demonstrated that they were not fibrin filaments, but behaved on the contrary like vegetation, and the relation to the disease was suggested. It took 30 years to settle this suggestion.

One of the chief confusions was that arising from the presence in dead animals of the vibron septique, the anaerobic bacillus mentioned above, when the animal died, not of anthrax, but of some other disease. This bacillus resembles under the microscope the rods of anthrax. Moreover, it was said that the rods seen so often in anthrax blood may accompany the virus of anthrax, but they are not the cause. "The virus is not something independent of the animal, but a modality of its being. It is living, it may be granted you, but it borrows its life from the being which carries it; it is nothing outside of the animal, and we recognize it only in transit through living beings."

A note by Pasteur in 1861 on the butyric acid bacterium reawakened the interest of the first observer, Davaine, and the results he obtained would certainly suffice to prove today the relationship between the bacterium and the disease. Koch in 1876, in a remarkable piece of work, had followed the life history of the anthrax bacillus, and showed the outstanding importance of the spore in the history of the disease. He used eight successive cultures, and reproduced the disease from the last growth. The amount of his culture medium was, however, so small that the results could still be explained by the presence of a diluted virus accompanying the bacillus, but independent from it. Then came Pasteur. He grew the bacillus in flasks of 50 cc. of neutral urine, transferred a drop to a new flask, and thus in three transfers had a dilution of the original material of about one in one billion. He continued his transfers until he had reached the fortieth, the fiftieth, the hundredth flask, and from these latter the disease was as readily produced as from the original blood. This was the demonstration given in the note of April 30, 1877, with a clearness and conciseness truly marvelous.

The discovery of the septic vibrio settled all other objections, and after this we can truly say that the theory of germs became established as a fact.

Pasteur did many other fundamental things in bacteriology, such as the demonstration of the effect of the filtered serum from anthrax in agglutinating red blood cells. This was the first phenomenon of the kind. He followed it by the

discovery of the toxic principle from filtered cultures of the bacillus of chicken cholera, which organism he also unearthed, and he thus laid the foundation for our knowledge of toxins. He was an indefatigable worker. He found the cause of boils, the staphylococcus, and finding it in a case of osteomyelitis he pronounced this a "boil of the bone," "a heresy to thus confound internal and external pathology."

The picture of Pasteur in the Academy of Medicine supporting his view of the question of puerperal infection is delightful. "One day, in a discussion on puerperal fever, at the Academy of Medicine, one of the most renowned of his colleagues made an eloquent dissertation on the causes of epidemics in the maternity hospitals. Pasteur, from his place in the audience, interrupted him: 'The cause of the epidemic is nothing of the kind! It is the doctor and his staff who carry the microbe from a sick woman to a healthy woman!' And when the orator replied that he was convinced that no one would ever find this microbe, Pasteur darted to the blackboard and drew the organism with its chaplets, saying, 'There! There is its picture!'"

Thus we have a wonderful example of this clear thinking, unconquerable worker piling up discovery after discovery, each one enough for one ordinary man's fame, and doing it all with a modesty that does the heart good.

United States Steel Company Orders Setting-up Exercises for Office Employees—Recently the United States Steel Company issued an order that all officers and employees in the general offices shall take setting-up exercises on the company's time in the rooms in which they work for ten minutes in the morning and ten minutes in the afternoon of each day. During the period of these exercises all business of the corporation is suspended, including even telephone messages. This is an important and initiative movement going in the right direction. Corporations and business houses with considerable office force would add to the efficiency of their employees and increase the volume of work by imitating the practice of the United States Steel Company.

Science is the topography of ignorance. From a few elevated points we triangulate vast spaces, inclosing infinite unknown details. We cast the lead, and draw up a little sand from abysses we may never reach with our dredges.

The best part of our knowledge is that which teaches us where knowledge leaves off and ignorance begins. Nothing more clearly separates a vulgar from a superior mind, than the confusion in the first between the little that it truly knows, on the one hand, and what it half knows and what it thinks it knows on the other.—Holmes' Medical Essays.

A medical school is not a scientific school, except just so far as medicine itself is a science. On the natural history side, medicine is a science; on the curative side, chiefly an art. This is implied in Hufeland's aphorism: "The physician must generalize the disease and individualize the patient."—Holmes' Medical Essays.

LOUIS PASTEUR—HIS CONTRIBUTION TO ANTHRAX, VACCINATION AND THE EVOLUTION OF A PRINCIPLE OF ACTIVE IMMUNIZATION.

By J. G. FITZGERALD, M. D.

(From the Department of Hygiene and Preventive Medicine and the Connaught Antitoxin Laboratories, University of Toronto)

In no other of the many fundamental contributions which Pasteur made to scientific knowledge has his extraordinary clarity of vision been more manifest than in his work on anthrax.

At the time (1877) when he began his investigations, first, in relation to the nature of the causative agent of the disease and later with respect to the question of protection against anthrax the actual knowledge of causation of communicable and epidemic diseases in general was in utter confusion.

Because of the great economic losses occasioned through the death of sheep and cattle from anthrax, several scientific workers before Pasteur, had interested themselves in the problem of its etiology. None of them, however, had satisfactorily resolved the question. In 1838 Delafond of the Alfort Veterinary College had observed and demonstrated in the blood of anthrax animals "little rods" to which he attached no importance, regarding them merely as a curiosity. Twelve years later in 1850 Davaine and Rayer again saw anthrax bacilli in the blood of animals that had died of the disease, without, however, appreciating their significance.

In the meantime, Pasteur published his paper dealing with the micro-organisms which are responsible for butyric acid fermentation. This paper greatly impressed Davaine and a number of years later in 1863 a physician, in whose neighborhood a number of sheep had died of anthrax, sent a sample of blood from these animals to Davaine, who found in it tiny bodies which he called "bacteridia." These he believed to be the cause of anthrax. This view he made public.

Immediately attempts were made to repeat his work because, of course, if true, it was of fundamental importance, since at this time, 1863, no so-called communicable disease had conclusively been shown to be due to a living micro-organism. At the important school of Val de Grace, Jaillard and Leplat were unable to corroborate Davaine's findings. Davaine himself repeated the work of these other investigators and concluded that the inoculum they had employed had not been obtained from a definite case of anthrax. Jaillard and Leplat at once obtained blood from an authenticated case of the disease and while rabbits died when inoculated with this material, their blood in turn did not show the presence of the little rods or "bacteridia."

About this time, 1876, Robert Koch began his studies of anthrax and introduced the first solid culture medium for the purposes of his investigation. He observed the vegetable and spore forms of

the anthrax bacilli and carefully investigated the pathogenicity of anthrax cultures for mice, guinea-pigs and rabbits. These bacilli now were definitely designated *B. anthracis*, and their etiological relationship to anthrax seemed to have been finally settled.

Just at this time, 1877, Paul Bert, a very distinguished French scientist, reported that he had been able to destroy anthrax bacilli contained in a drop of blood by exposing them to compressed oxygen; to inject the material remaining after such exposure to oxygen into suitable animals and produce the disease in them without, however, any anthrax bacilli being found in their blood. He concluded, then, that "bacteridia are neither the cause nor necessary effect of splenic fever (anthrax) which must be due to a virus." Confusion once more reigned in regard to the whole matter.

Pasteur undertook to investigate the question. He took a small amount of blood from an animal that had died of anthrax, and with all aseptic precautions planted it in a sterile flask containing a slightly alkaline, sterile culture medium—he used urine for the purpose. In this medium he grew cultures of the anthrax bacilli. He noted the characteristic tangled filamentous skeins of bacilli in the medium. He subcultured his growths by carrying over from flasks in which the bacilli were growing a few drops to other flasks of sterile culture medium, thus seeding it and giving rise to new generations of these micro-organisms.

A drop of culture material from flasks so inoculated, injected into susceptible animals, produced in them the disease anthrax. He thus conclusively established the etiological relationship of *B. anthracis* to the disease anthrax. He showed furthermore that there were two distinct forms, the vegetative and spore, which anthrax bacilli might assume.

Pasteur, with a number of other investigators, in 1877 constituted a commission to examine into the discordant results of Jaillard and Leplat and Paul Bert. To summarize briefly, they learned that these other workers had been dealing with mixed cultures of *B. anthracis* and a septic vibrio. The former an aerobe, the latter an anaerobe. Pure cultures of both were obtained by Pasteur and under appropriate conditions, each was grown in artificial media. The septic vibrio was shown to be highly pathogenic for rabbits and this fact explained Jaillard and Leplat's results.

The true explanation of Paul Bert's findings was next given by Pasteur when he was able to demonstrate that compressed oxygen destroyed the vegetative forms but not anthrax spores. Bert had destroyed the vegetative forms. The spores resisted and were capable of transmitting infection. Paul Bert himself to the *Société de Biologie* in 1877 announced his mistake and accepted Pasteur's interpretation of the experimental results he had obtained. Many doubts remained in the minds of certain skeptical observers of that time, but today it is realized that this work was of the most fundamental importance and blazed the trail for much of the splendid progress in bacteriology of the next 25 years.

Three years later, in 1880, were begun a series of experiments which were as profoundly to influence the future of specific prevention of disease as did the monumental work of Edward Jenner, carried on nearly one hundred years before. By chance, (and here it is well to recall Pasteur's immortal words "by chance you will say; chance only favors the mind that is prepared") or as his son-in-law, Vallery-Radot, has expressed it: "A chance such as happens to those who have the genius of observation." In examining some old cultures of the micro-organisms of chicken cholera it was learned that these cultures which had been put away and not replanted for several weeks had lost nearly all the virulence or pathogenicity possessed by young, vigorously growing cultures, replanted daily. Hens injected with small amounts of the old cultures of chicken cholera developed some of the symptoms of the disease, but soon recovered. On recovery, if subsequently inoculated with young virulent cultures of chicken cholera germs, these hens remained refractory or immune and developed no symptoms of the disease.

Pasteur at once appreciated the fact that an underlying fundamental principle of active immunization had been demonstrated in his work on chicken cholera. He learned by experiment, that the micro-organisms of this disease could be reduced to any desired degree of virulence by prolonged growth and exposure to an abundant supply of oxygen. He produced in this manner two bacterial vaccines, one of stronger, the other of weaker virulence and by inoculating normal hens with a dose of each vaccine they were rendered immune to spontaneous or artificial infection with living highly virulent microbes of chicken cholera.

While it is true, and Pasteur was the first to proclaim it, that the principle of attenuation of virulence underlying vaccination against smallpox, as demonstrated by Jenner, served to guide him in this work, the fact remains that this was the first instance in which a pathogenic microbe was isolated in pure culture, studied and employed as a bacterial vaccine after appropriate attenuation of virulence had been achieved. Furthermore, important facts relating to methods of attenuation were also gleaned during the progress of the work.

During the next year, 1881, in association with Chamberland and Roux, Pasteur applied himself to the problem of vaccination against anthrax. This was a much more difficult task, however, because of the greater virulence of anthrax bacilli. Toussaint, a distinguished French veterinarian, had just published a communication in which he claimed he had succeeded in vaccinating sheep against anthrax. He had taken blood from sheep suffering from the disease just before or immediately after death, heated it to 55 degrees C. for 10 minutes and inoculated normal sheep with this heated blood.

Pasteur, Chamberland and Roux soon learned through experimentation that anthrax bacilli, while they might sometimes be inhibited in their growth by heating to 55° C., were not necessarily killed. Toussaint then employed carbolic acid for the purpose of attenuating the virulence of

his cultures. This procedure also proved to be very uncertain. After a long series of experiments in which chief reliance was placed on physical methods, for the attenuation of virulence and inhibition of growth and spore formation (this latter was really the crux of the difficulty) it was ascertained that the growth of anthrax bacilli in a neutral broth medium was inhibited at 45° C. It was also learned that they can be readily cultivated at 42° or 43° C., but at these temperatures spores do not develop. This latter discovery paved the way for the development of a sound method of anthrax vaccination which obviated the necessity of resorting to the procedure of Toussaint, which had proved to be uncertain and dangerous.

Pasteur's method consisted in growing anthrax bacilli in neutral chicken broth at 42° C. for twelve and twenty-four days, respectively, during which time a marked reduction in virulence of the microbes occurs. After twelve days' growth under the above conditions the culture was no longer able to kill rabbits, but was fatal for guinea pigs or mice. After 24 days' growth it is no longer virulent for guinea pigs, but still was able to kill mice. The more fully attenuated cultures constituted the "premier vaccin." Cattle or sheep, when being immunized, were first given a dose of the weaker culture and ten or twelve days later a dose of the stronger one.

On May 5, 1881, at the farm of Pouilly le Fort, near the little town of Melun, was begun the practical test of Pasteur's anthrax vaccine, which has become famous in the annals of scientific medicine. Fifty sheep and ten cows were used for the experiment, twenty-five of the sheep and six cows were vaccinated and twenty-five sheep and four cows were not. The first injections of vaccine were given May 5, the second on May 17. On May 31 a third and final injection was also given. On the same day all the animals were injected with a quantity of living, virulent culture of anthrax bacilli. By June 5 all the unvaccinated sheep were dead and only one of the vaccinated; this one had aborted and died of hemorrhage. All the others remained perfectly well. The six vaccinated cows were quite normal and the four unvaccinated presented enormous oedemata.

Pasteur's triumph was complete and he was acclaimed by the whole of France. The government recognized his great service to science and to agriculture in formally awarding him the Grand Cordon of the Legion d'honneur. In August of the same year he represented the government of the French republic at the International Medical Congress in London. There he received a most remarkable ovation and was the center of interest during the meetings of the congress. The London correspondent of the *Paris Journal des Débats* wrote to his paper as follows, describing the events: "When M. Pasteur spoke, when his name was mentioned, a thunder of applause arose from all benches from all nations. An indefatigable worker, a sagacious seeker, a precise and brilliant experimentalist, an implacable logician and an

enthusiastic apostle, he has produced an invincible effect on every mind."

For the past forty years active immunization on a very large scale against anthrax has been carried on in many parts of the world with much success and with very great economic benefit to the communities concerned.

Since 1881 bacterial vaccines have been developed for the specific prevention of typhoid and paratyphoid fevers, bacillary dysentery, asiatic cholera, bubonic plague, pneumonia, whooping cough and other diseases of microbic origin. Many of these have found a very wide field of usefulness and enormous success has attended the employment of certain of them. The results obtained from the use of typhoid and paratyphoid vaccine among members of the Canadian Expeditionary Force during the Great War, when contrasted with the experience of the South African War of 1899-1901, will serve as an illustration. In South Africa the war last two years and seven months; 548,237 men were engaged. Among these, 59,864 cases of enteric fever occurred. This was an admission ratio of 122.9 per 1000. Among these cases there were 8248 deaths, a ratio of 18.6 per 1000. During the Great War, in a period of four years, 420,000 Canadians were engaged. Among these there were 420 cases of typhoid fever with only 14 deaths. An admission ratio of 1 per 1000 contrasted with 122; and a death ratio of 0.003 per 1000 contrasted with 18.6. Equally satisfactory results obtained in the American Expeditionary Force. In an average strength of 2,121,396 between September 1, 1917, and May 2, 1919, in the A. E. F., there were 213 deaths from typhoid fever. Had the Spanish-American War rate obtained there would have been 68,164 deaths instead of 213. Specific prevention through the use of typhoid vaccine more than any other factor was responsible for this splendid achievement.

These and other like triumphs of specific preventive medicine constitute the mighty oak which has sprung from the tiny acorn sown by Louis Pasteur at Pouilly le Fort in May, 1881.

Health Bills—The Public Health Service and the National Health Council in their bi-weekly Bulletin of January 20, list the following bills entered in the Nebraska Legislature under the head of "Health Bills":

"1. Medical Practice—H. 17, would permit duly licensed physicians of any school or system of healing, including religion, to treat patients in institutions receiving support from city, county or State."

"2. School Hygiene—H. 39, would amend the law to excuse from physical examination children whose parents object."

Movement in New Jersey to Shorten the Course of Training for Nurses—A committee of the New Jersey State Medical Society and representatives of nursing organizations of the State, after a number of conferences, have concluded to shorten the period of training for student nurses. They propose to make the shorter period more intensive by eliminating manual labor which may be performed by ward attendants.

PASTEUR'S DISCOVERY OF THE PREVENTIVE TREATMENT FOR RABIES.

By WILFRED H. KELLOGG, M. D.
(From the California State Hygienic Laboratory,
Berkeley)

The discovery of the preventive treatment against rabies was the last great work of Pasteur and in some respects the greatest: not the greatest because of its economic value nor of the resulting saving of human life, but because of the mental power displayed in its development, and the far-reaching results of the work on the advancement of science. The rabies work was in logical sequence to the series of immunologic facts uncovered as a direct result of his studies of fermentation.

To appreciate the enormity of achievement represented by the studies on fermentation, the final conquering of the medieval fiction of spontaneous generation of life, the isolation and culture of the bacillus of chicken cholera, the anthrax work, et cetera, we must recall the state of human knowledge concerning the nature of disease, as it was in the seventies of the last century. At that time there was no science of bacteriology, no technique of isolation and culture of micro-organisms, no sterilizing methods, no special glassware, no stains, no culture media, no laboratories as we know them now. The nature of infectious disease was not known and the mortality from ordinary amputations in hospitals was over sixty per cent. A visit to an ambulance ward during the war of 1870 disclosed a sight of horror, described by those who have seen it, as one never to be forgotten. Velpeau, the surgeon, said "a pin prick is a door open to death." The mortality of puerperal septicemia in the Paris hospitals was as high as 30 per cent at times.

It was under conditions such as these that Pasteur perceived the analogy between infection of living tissues and fermentation of organic matter, and wrote: "It is impossible not to observe that, the further we penetrate into the experimental study of germs, the more we perceive sudden lights and clear ideas on the knowledge of the causes of the contagious diseases." And further, "Is it not permissible to believe, by analogy, that a day will come when easily applied preventive measures will arrest those scourges which suddenly desolate and terrify populations; such as the fearful disease which has recently invaded Senegal and the Valley of the Mississippi (yellow fever) and that other yet more terrible perhaps, which has ravaged the banks of the Volga." (Bubonic plague.) Microscopes of gradually improving excellence had long been used and bacteria had been observed, but it remained for Pasteur to recognize and prove the causal relation of bacteria to some of the conditions in which they were found and to recognize the great role played by bacteria in the whole scheme of nature. Considering that Pasteur was not a biologist nor even a physician, but a chemist, his accomplishment of creating the technique of a new science and utilizing it for important discoveries in that science is indeed remarkable.

It was his accidental discovery of the loss in virulence sustained by chicken cholera cultures, when allowed to age without replanting, and the immunizing property of such cultures, that led to his studies of anthrax with such brilliant results. The next step was the study of rabies, which was commenced with the idea of finding the causative organism and preparing a modified virus or vaccine as had been done for chicken cholera. He believed, that owing to the long incubation period in rabies, a vaccine would immunize bitten persons before the normal time of onset. In this he proved to be right, but attainment of the goal was delayed by his efforts to identify and isolate the parasite. All that was known about rabies at the time Pasteur commenced his studies of that disease in 1880, was its transmission by the bite of a rabid animal, the infectiousness of the saliva, the long incubation period and its uniform fatality. Experiments were first directed toward transmission of the disease by inoculation with saliva. Mad dogs were brought to him by Bourrel, an old army veterinarian, who had long been endeavoring to find a cure for rabies. Bourrel had invented a preventive measure which consisted in filing down the teeth of dogs so they could not bite.

It should be remembered that rabies was exceedingly prevalent in Europe and inspired the greatest terror; there were few partisans of the theory of imaginary rabies in those days.

In December, 1880, Pasteur visited a five-year-old child dying of rabies in the Trousseau Hospital, and secured some saliva, which inoculated into rabbits, produced death in thirty-six hours. This infection could be carried from rabbit to rabbit and while there were some who thought the rabbits died of rabies, Pasteur was more conservative and soon found that an organism was present in the blood of the rabbits, but not of rabid dogs, and that the disease could be produced by inoculating rabbits with the saliva of normal individuals. The organism was that known later as the pneumococcus and also found by Sternberg in the saliva. He made numberless attempts to produce rabies in rabbits by inoculating with saliva but the results were very uncertain and the incubation periods long. Finally as a result of increased experience in the observation of rabid dogs, he concluded that the seat of the infection was in the central nervous system. The result of this conclusion was the inoculation of animals with emulsions of brain substance, which were much more successful than the salivary inoculations, but still subject to the annoyance of long and variable incubation periods and frequent failures to infect.

If progress was to be made in the study of the virus it was necessary to make inoculation certain and the incubation period shorter. It became obvious that inoculation directly into the brain of the experimental animal should be tried but at this Pasteur hesitated; and here we get a side light on the character of the man. We see how mistaken has been the observation of the anti-vivisection fanatics who have delighted in describing him as an arch-fiend, delighting in the torture of laboratory animals. From England especially he received

numerous letters from these people who did their best to insult and harass him.

Pasteur could not bring himself to direct the trephining of the skull of a dog, although he could assist at simple operations such as subcutaneous inoculations; but even here if the animal cried he was much disturbed and overcome with compassion for it. Finally one day, in Pasteur's absence, Roux undertook the operation in which he found no difficulty. The next day, Pasteur was informed of the progress made, when he immediately expressed sympathy for the dog—saying that it was no doubt paralyzed and suffering. But when Pasteur saw him capering about the laboratory as though nothing whatever had happened, he was overjoyed, for now the experiments could go forward without delay and without compunction on account of the necessity of trephining. He always, however, insisted upon the use of chloroform for the slightest of operations in his laboratory.

Pasteur now saw the way open to a cultivation of the parasite of rabies. Not being able to isolate it, or cultivate it on artificial media, although he knew that such a parasite existed and was present in the brains of rabid animals, he conceived the idea of propagating it continuously in the brains of living rabbits. This was done and it was found that not only was the result of inoculation certain but the incubation period was constantly lessened, until after the passage through a hundred rabbits it produced death uniformly in seven days, at which point it remained fixed.

Having now a culture of uniform virulence, in a culture medium of nervous tissue instead of in bouillon as in the case of anthrax, he turned his attention to a means of reducing its virulence to a point where it no longer produced the disease, but where it might still, as in anthrax, produce immunity. The method of exposure to air, having impressed itself upon his mind as being an important factor in the attenuation of virulence of cultures of anthrax and chicken cholera, it was tried with rabies by exposing pieces of rabbit medulla in jars, over caustic potash to insure a dry atmosphere. It was found that this drying gradually lessened the virulence of the material so that in fourteen days infection could no longer be produced with it. Whether Pasteur realized the extent to which fixation in the rabbit had reduced the virulence for man and the dog is not clear but there seems little doubt that such is the case. The process of exaltation of virulence for the rabbit results at the same time in a decrease of virulence for man and this is the chief protection against infection of man, when immunization with rabbit cord, by the Pasteur method or any of its modifications, is practiced.

The immunization of dogs was now commenced by inoculating them subcutaneously with small amounts of fourteen day cord, then thirteen, and so on till they received fresh virus. These dogs were found to be protected when they were bitten by rabid dogs and also when inoculated subdurally. Pasteur considered for some time the trial of the preventive treatment upon human beings but could not bring himself to the actual injection of in-

fectious material even though proved harmless on dogs. In March, 1885, he wrote to a friend as follows: "I am demonstrating this year that dogs can be vaccinated or made refractory to rabies *after* they have been bitten by a mad dog. I have not yet dared to treat human beings after bites from rabid dogs, but the time is not far off, and I am much inclined to begin by myself—inoculating myself with rabies, and then arresting the consequences; for I am beginning to feel very sure of my results."

However, the question was soon settled for him, by the appearance at the laboratory on July 6, 1885, of a little Alsatian boy, named Joseph Meister, nine years old. The boy had been severely bitten in fourteen places, and the dog had been pronounced rabid by a veterinarian. The trip to Paris had been made by the boy and his mother on the advice of a local physician who told them that Pasteur, although not a physician, could tell them what, if anything, could be done. Pasteur was greatly disturbed as to the proper course of action. He called in his assistant, Dr. Grancher, and Vulpian, of the Academy and member of the Commission appointed to investigate the rabies work. The decision was that considering the gravity of the case and the fact that only carbolic acid and not actual cautery had been applied to the wound, the boy should have the benefit of the chance of treatment. As the inoculations grew stronger, Pasteur became more and more anxious and lost much sleep over the outcome, but finally the suspense ended, the boy remained well, returned to his home and the first application of the Pasteur preventive treatment was a matter of history.

After the treatment of a second case in October, Pasteur read his paper at the Academy, the result being as usual in such cases, an immediate division of the members into three groups; those who were enthusiastic, those who were reserved, and those who were violently skeptical and hostile.

After the publication of Pasteur's paper, people began to flock in from all sides for treatment and the clinic soon was going on an extensive scale. In 1886, four children were sent, by subscription of the New York Herald, from New York for treatment. Out of the first 350 cases treated there was only one death; that of a little girl bitten on the face thirty-seven days before commencing treatment. Then came nineteen Russians, bitten two weeks before by a mad wolf—all severely. Three of these died, which greatly encouraged opponents in France, but the general belief in the treatment was not checked.

The Academy of Sciences appointed a commission, who unanimously made the suggestion that an establishment for the preventive treatment of rabies should be created in Paris under the name of the Institut Pasteur. A subscription for this purpose was opened and was generously and enthusiastically contributed to in all parts of the world. A total of 2,586,000 francs was received, which constructed the building and provided an endowment toward the support of the institution.

The preventive treatment against rabies has been found to be an almost certain protection when

commenced within a reasonable time after the bite by a rabid animal. Under this treatment the mortality averages about half of one per cent instead of approximately 16 per cent, which is the chance of infection in untreated persons.

Little change has taken place in the method of preparing and administering the treatment since the time of Pasteur. Several modifications are in use, notably those of Hoges and Ferran, in both of which fresh rabbit cord is used in varying dilution instead of the dried cord according to Pasteur. In this country Harris has introduced a method in which the rabic material is dried in vacuo at a temperature lower than zero centigrade, pulverized and sealed in glass ampoules. This powder is mixed with sterile water and injected the same as the emulsified dried cord. The favorable results appear to be fairly uniform with all these various methods of treatment. The method that is in use at the State Hygienic Laboratory is a slight modification of the original Pasteur treatment, the principle differences being that the treatment is commenced with cord that has been dried for only six days instead of fourteen as in the original Pasteur method and the strength is rapidly increased until one-day cord is used instead of stopping at three-day cord as was done by Pasteur.

Sheppard-Towner Maternity Bill—Commenting on the reaction of the mothers of the country to the provisions of this bill, the Miami, Florida, Herald has the following to say:

"Take for example the feature of the law which provides that midwives should be permitted to attend only such women as offer every prospect of having a normal labor.

"This, as Senator Reed points out, would require a physical examination of the women. In other words, every time there is to be a birth in this enormous country a public official would come into the house, whether you wanted him or not, to tell you if you needed a midwife or a specialist. The following procedure is then suggested: 'After a reputable physician or authorized examiner had certified that birth would very likely be a normal one, this could be further checked by the health department providing suitable blanks for the purpose and that they must be returned when the birth certificate is filed. Furthermore, the midwives should be required by law, even in the cases, which have been certified as presumably normal, to call a physician whenever labor lasts more than twenty-four hours or any abnormality develops. Such a procedure would have a very highly educative effect upon the patients, especially upon the foreign born.' And this is Senator Reed's comment, as printed in the Congressional Record: 'Yes, Mr. President, it will have a highly educative effect. It will teach our people to hate the government that invades their homes, that thrusts the ugly face of a politician, who tramped in Washington to get a job, into the sacred chamber of the woman about to give birth to a child.' Ah, did the women who so piously followed the lead of the cure-all reformers think of that? To quote Senator Reed again: 'To carry out this plan there must be created a vast army of officials, spies, snoopers, tattletales, informers and meddlers. According to the opinion of these reformers and theorists, no housewife can properly cook a meal unless instructed by them. Mothers are incapable of bearing children properly unless they have had at least a few lessons from women who have never given birth to a child.' Here is a new light on our dear paternalistic maternalistic legislation."

DRY BRAIN VERSUS WET BRAIN *

By CECIL E. REYNOLDS, M. D., Los Angeles

Many years ago a veteran officer of the Civil War propounded to me a question. He said, "Why is it that men, shot in the head, so often bury the wounded side in the ground." He also added that this action, to his way of thinking the worst possible thing to do, was so constant that it puzzled him. I was not at the time prepared with an answer, but I believe the answer can be supplied by observing a large number of patients with operative wounds near the vertex as well as patients with non-traumatic parietal lesions. These patients are frequently more comfortable and, under certain circumstances, instinctively seek to lie upon the "operated" side or upon the side of the lesion.

In the case of the soldiers referred to, if the observation was correct, Nature's purposes presumably were to wash away foreign matter as far as possible with the excess fluid she provides, and to float the brain upwards and prevent contact and adhesions to the injured portion of the cranium, for as a matter of fact, in spite of the weight of the brain, fluid collects at the most dependent parts.

If the hole in the dura mater is not shut off by adhesions from the osmotic arachnoid within a reasonable time, the patient will die from leakage of cerebro-spinal fluid, hence nature steps in once again and, if the patient is at all conscious, a dangerous loss of fluid is heralded by extreme restlessness and an uncontrollable impulse to raise the head, in part, possibly, on account of dyspnoea. This is a constant observation. Accompanying this impulse to rise is an abnormal elevation of temperature, a rapid shallow respiration with air-hunger, dilated pupils and an expression of terror. Assuming the semi-conscious individual has succeeded in propping himself up, and his life has been saved temporarily by a fresh supply of fluid from his choroid plexus finding its way into the fourth ventricle and the external opening has been closed by adhesions, his condition, apart from hemorrhage and sepsis, is now likely to improve for some hours. However, after a variable time, usually from eight to twelve hours, the draining of his diminished fluid down from the cerebral cortex to the base in addition to what has already seeped into the scalp will induce a condition of "dry brain," which is heralded by precisely similar symptoms of rapid dyspnoea, fever, etc., as occurred when the leakage was external, and, in addition severe convulsions will certainly appear.

These fits will naturally tend to disconnect the patient from his support and to enforce a recumbent posture once again.

Moreover, these fits are at first strongly Jacksonian so that, if the wound is in the left parietal region, the head and eyes will go to the right and the right arm and leg will be convulsed, and this tends to again bring the wounded side downwards

* Paper read before the fifty-first convention of the Medical Society of the State of California, Yosemite Valley, May 17, 1922.

against the ground. Especially is this the case when consciousness is at all retained, as it often is at first, for, the head being forcibly turned to the right, the patient will lie on the left side in order to get air. Thus is more protective fluid supplied to the wounded cortex.

Hence, it is seen that nature has provided certain coarse integrative mechanisms to adjust the hydrostatic necessities of the organism in head injury as well as the circulatory, and leaves to other biological protective mechanisms the bacteriological problems.

The above mechanisms I have been able to study most vividly in the forty or more cases of chronic external hydrocephalus upon which I have operated, because in these cases the fluid and brain volume stand in unstable relation to each other and often the fluid is straining to escape in a manner that does not obtain to anything like the same degree in other conditions. Moreover, the surgical cure depends upon leaving the dura mater open in a variable number of places. Hence, it will readily be appreciated that the changes from wet brain to dry brain and vice versa in these cases bear a similar relation to other cerebral surgery as does the ordinary motion picture to those presented by the ultra-rapid camera.

In other words, in external hydrocephalus there exist all the complications due to changes in fluid pressure and level crowded upon the patient in a few hours with kaleidoscopic vividness.

The first rule to observe, therefore, is that of gradual reduction of pressure. The dura must never be opened more than a pin-prick or two during the first operation either above or below the tentorium.

During operations at the vertex the head should be raised nearly 45 degrees which obviously limits the leakage of fluid, and if the blood pressure sinks too low before the dura is opened, it can be restored by lowering the head; thus, a safety margin is provided and a warning issued against opening the dura at this stage.

After the dura has been opened even a little in these cases, lowering the head during operation becomes experimental with the odds against the patient.

Likewise in the suboccipital operation, it is well to commence with the head raised 30 degrees, so that the warning given by the blood pressure is in ample time instead of in marginal time, and even during the second stage of this operation, below the tentorium, it is better to keep the head slightly raised as long as the blood pressure is good. This conserves the fluid in the spinal theca and does not make much difference to the amount lost from the ventricles unless the iter of Sylvius is dilated.

In such cases I take the precaution of having the deep silk muscle sutures in place before opening the dura, so that they can be rapidly drawn tight and limit the leakage. The skin must also be accurately closed.

Since no external drains are used in the suboccipital operation, the patient can be placed in

bed with the head low if necessary, but it is better slightly raised if the general condition is good, because in one epileptic infant with advanced external hydrocephalus, the only few drops of blood that did ooze from the muscles wandered upward and formed a firm clot in the iter of Sylvius, owing to the head being kept low for forty-eight hours.

This is the only instance of the kind I have known, however, and I do not hesitate to raise the foot of the bed after a suboccipital operation or a radical fourth ventricle operation if there is the least shock. Most cases are better on one pillow.

At the vertex things are much more complicated, especially where there is a large osteoplastic flap. It is vitally necessary that no blood should congeal upon the arachnoid or pia, and therefore some thin, flat rubber drains are necessary after both stages.

This is a straightforward affair after stage one, when the drains can remain in for thirty-six hours, but after stage two, when the dura is open, it means that the surgeon has practically to stay at the bedside until those drains are out.

This statement is true of all cases in which there is a breach of dura, but it is greatly magnified in cases of external hydrocephalus.

If signs of loss of fluid appear, such as rapid shallow respiration, undue rise of temperature, restless anxiety, frequent pulse, and dilating pupils, the drains should come out, blood or no blood.

Otherwise, the drains stay in until the color on the dressing shows that such blood as has oozed from the diploe is thoroughly laked by cerebrospinal fluid and is uncoagulable—usually about twenty-four hours or less.

During this time adults will often stand a fairly low position of the head which favors complete cleansing, but hydrocephalic children seldom can be lowered.

After the drains are out, the slits in the scalp quickly seal up, especially if the head is raised, and when this is complete it is safer to keep the head fairly low and on the "operated" side. This allows a flood of oedema to separate the inflamed surfaces.

However, this protective mechanism can go too far, and when this is the case marked hebétude and some paresis is observed, with slow, deep, sighing respiration, and later on mild convulsions, usually Jacksonian in type, will occur. These will certainly occur if there is the least renal insufficiency, for then the stagnant fluid at the site of operation becomes loaded with urea and acetone. Doctors Brem, Zeiler and Hammack have found 29 mgms. per cubic centimeter of cerebrospinal fluid in one of my cases. The convulsions in such a case are the result of toxicity and pressure, combined.

When these signs of wet brain are recognized, the head will naturally be raised, and if a renal condition is threatening, dermatoclysis and hot packs are added to the therapy. All cases are given as much water by mouth and glucose and

sodium bicarbonate solution by rectum as can be retained, and hexamethylenamine before and after operation, unless contra-indicated.

If no renal insufficiency is present, raising the head is followed by a rapid subsidence of wet brain symptoms, excepting only the paresis, which may persist for a few days. Should the fits persist, the differential diagnosis between uraemia, acute swelling, and secondary hemorrhage will have to be instantly made. Lumbar puncture may be cautiously used in acute swelling. Fortunately, these complications are rare in properly selected cases, and as a rule the condition will be highly satisfactory for about twelve hours after the head is raised.

Then, often but not always, a condition of secondary dry brain sets in if the patient has been kept longer on a back-rest. The fluid has not only passed down to the basal cisterns, but out around the edges of the bone flap into the lymphatics of the scalp, and the rise in rate of respiration is the great important fact to be reported by the nurse. With it is an undue rise of temperature and a widening of the palpebral fissures and of the pupils.

If this condition is not recognized and the head immediately lowered on to the "operated" side, the surgeon will be greeted with the worst possible picture of Jacksonian epilepsy, passing into status with capillary hemorrhage. Should such a calamity take a surgeon unawares, the patient can probably be saved by immediately opening up the flap, washing out, closing completely, and keeping the head low for several days. It is evident, therefore, that dry brain is a more serious and urgent complication than wet brain. Headache may be complained of in either wet or dry brain. I suspect that many cases of reported hyperpyrexia have been due to dry brain. Early dry brain fits should be controlled with light chloroform narcosis until the brain is wet again, provided there is no uraemia or marked acetonaemia. After the third post-operative day no anxiety need be felt on account of either wet or dry brain. The assistance that is gained by familiarity with the above principles is well illustrated by the following case.

A married woman, age 33, suffered an injury to the head in an automobile accident three years ago. Although there was said to be no fracture of the skull, she thereafter suffered intense periodical shooting headache in the right parietal region. Eight months ago, after an unusually severe headache, sudden coma and paralysis supervened and it was clearly a classical case of apoplexy, possibly due to rupture of a traumatic aneurysm or adhesions.

When I was called to the case twenty hours later she appeared moribund, but there were some indications that the left side was more profoundly paralyzed and the right pupil was more dilated—both pupils fixed.

I performed a right subtemporal decompression and fluid blood came out in scant amount when the dura was opened. Accordingly, I turned up a large osteoplastic flap over the right Rolandic area, and upon opening the dura a firm clot was

seen to be spread over the entire hemisphere beneath the arachnoid, certainly, and, as far as could be determined, beneath the pia as well.

This was so intimate with the grey matter that its removal was out of the question. I, therefore, opened one of the pial veins to see if the blood in the vessels was fluid and, finding this to be the case, the dura was left unstitched as usual, the flap replaced, and a thin unstuffed rubber-tissue drain brought out through the temporal muscle.

She was placed in bed with the foot so elevated that the head was very low and abundant liquids provided per rectum, etc.

The drain remained in for two days without dangerous loss of fluid; in fact, the fluid evidently came through the bloody arachnoid with difficulty. When almost clear cerebrospinal fluid was seen on the dressing and oozing from the wound, the drain was removed. She was kept with the head low for several weeks. During the second week she had violent and continuous Jacksonian fits affecting chiefly the head and eyes to the left and the jaw and tongue to the left. These fits became less violent and frequent after seven days and she now has diminishing fits about once in two weeks or a month, and is in perfect condition mentally and physically. No trace remains of the hemiplegia which persisted some weeks after restoration of consciousness. Nature washed away a clot in record time that no surgeon could afford to meddle with. The pupils are now equal in size and reaction.

This indicates the application of the above principles to the post-operative treatment of spontaneous cortical hemorrhage.

The same thing applies in non-operative cortical hemorrhage, into which group some will fall on account of age and blood pressure.

As soon as it is judged that the bleeding has ceased and the symptoms are no longer progressive, it is better to ensure a liberal flow of cerebrospinal fluid to the clot before it hardens and sets, and in order to obtain fresh relays of fluid a system of four hours down upon the hemorrhagic side and two hours upon a back-rest to allow absorption alternately for several days would flush the damaged cortex most satisfactorily.

The possibility of secondary venous thrombosis from pressure, however, must be also considered.

Again, in traumatic cases insufficient to cause hemorrhage, nature protests the violence done to the skull, by pouring out an extra volume of protective fluid immediately beneath the site of applied violence. Unfortunately, this fluid often becomes locked up by surrounding adhesions, producing the familiar arachnoid cyst responsible for so many mental and epileptic syndromes, and necessitating later operation.

Placing the patient low upon the assaulted side tends to generalize the fluid, and raising the head for two hours out of every eight will avoid in such cases the excessive wet brain symptoms.

I accidentally discovered a high degree of wet brain in a case of encephalitis lethargica. Before I had learned the art of ventriculography, I exposed by osteoplastic flap a large area of cerebrum

in a woman who had remained deeply comatose for about three weeks with optic neuritis and some focal signs suggestive of tumor. Everything was water-logged and lumbar puncture also revealed excessive fluid under pressure. She made a perfect recovery, excepting only some pains in the limbs for six months, suggestive of a thalamic disturbance. There were no other sequelae.

Since the prognosis in such cases is so poor, this experience would suggest that the brain may suffer from prolonged contact with stagnant toxic fluid. Repeated lumbar puncture followed by dermatoclysis and a lowered head would be most likely to wash the brain clean. Again, I would suggest eight hours down and two hours up. Hexamethylenamine would also be indicated.

This last deduction is more theoretical, as my experience of encephalitis lethargica is very limited in comparison with that of several members present at this meeting, but my intention is to arouse further attention to the importance of the purely mechanical factors relating to the degree of wetness or dryness of the surface of the cerebrum and to show that, beyond certain limits, it is a vital matter. Such as they are, these remarks are based on over two hundred operations upon patients ranging in age from four days to sixty-eight years.

It may be added that these complications are less likely to give trouble in extensive resection of lobes of the brain than in extensive exposure of surfaces of brain, in my experience.

In regard to acute brain injuries, repeated lumbar puncture has been often and strongly advocated, but in the papers I have seen no account has been taken of the danger of making the extravasated blood too dry, good as the method is in other respects. In every attempt to aid nature there is a possibility of upsetting her best laid plans.

As stated above, the dura mater is left open in the operations for chronic external hydrocephalus for reasons that are sufficiently evident; but it is not so obvious why the same procedure is necessary in all other cases of epilepsy which have been selected for operation, such as vertical meningitis and internal hydrocephalus in some instances, even after a satisfactory fourth ventricle operation.

It would seem that a procedure which requires such assiduous post-operative care should have further support than empirical success only. Dr. Edward Franklin has searched the literature assiduously and informs me that, in his opinion, the neuroglia is a medium of nutritional exchange for the neurons, becomes hypernutritive in epilepsy, and after repeated fits becomes hypertrophied and increased in quantity, and finally degenerates into non-nutritive tissue, fibrous in character. This would account for the resistance of all long-standing cases to medical treatment, and the comparatively high percentage of complete and partial recoveries which have been obtained by leaving large flaps of dura wide open over both cerebral and cerebellar hemispheres, as well as by simple decompression exceptionally. It also accounts for the slight persisting fulness of the subtemporal ob-

servation window in some cases in whom an internal hydrocephalus has been corrected.

DISCUSSION

In reply to Dr. Milton Lennon: The wet brains seen have presented arteriolic contraction and in some instances venous congestion has been evident. On the rare occasions where inspection has been inevitable on account of dry brain, there has been intense hyperemia and injection, only seen, however, after many fits. Thus fits due to the irritation of either dry brain or concentrated toxemia tend to become continuous and pass into status, and are not as periodic as are fits due to arteriospasm, such as occurs in most forms of epilepsy, in my belief.

THE NECESSITY FOR MORE ACCURATE DATA IN THE SURGEON'S PERMANENT DISABILITY REPORT *

By F. E. RAYNES, San Francisco

SUMMARY

1. Attention invited to letter of instructions from Industrial Accident Commission.
2. Necessity for uniformity.
3. Necessity for full and accurate measurements for lost function.
4. Necessity for accurate record of occupation when hurt, age, and wages.
5. Permanent disability rating is not applicable while improvement in function can be obtained by treatment.

It has been the endeavor of the Permanent Disability Rating Department of the Industrial Accident Commission for some time past to enlist the co-operation of surgeons who do industrial work, and secure more accurate reports of the disability existing at the time of final report. Results have been very satisfactory among the surgeons doing a large bulk of the work in San Francisco. We have been able to get in personal touch with them and explain our needs and the difficulties encountered by us.

This department recently sent out a form-letter to the surgeons, explaining briefly the needs and the methods adopted by us in determining loss of function in different disabilities, so that it is unnecessary to take up time in repetition.

Our aim and endeavor is to rate the injured man on the actual disability presented; no more, no less. It is for this reason that we earnestly solicit the co-operation of the attending surgeon to aid us in arriving at a correct conclusion. It can readily be understood that the surgeon attending a given case from its inception is in a position to throw light on many conditions that it would be difficult for us to ascertain by seeing the case, say once or twice.

Often, a man comes to this department complaining of many vague and apparently disabling symptoms which it is difficult for us to correlate to his injury. It is the attending surgeon, in many of these cases, who can help us separate the wheat from the chaff.

* Read before the Section on Industrial Medicine, Medical Society of California, Yosemite National Park, May 16, 1922.

There are some individuals who, when they know that their case is up for a rating, are prone to put their worst foot forward and exaggerate all of their symptoms. At times they add others which do not exist, or which have no relation to their injury. In many instances it has been necessary for us to recall these individuals for numerous examinations before reaching a final conclusion.

On the other hand, cases have called at this department with severe disabilities, which have been covered by the surgeon's report in such a general way as to make it difficult to make a correct rating, and in many instances a grave injustice would be done the injured man if the case were rated only on the information furnished by the attending surgeon. This lack of information on the part of the surgeon is not intention on his part to avoid giving complete data, but is, we are sure, due to the fact that the average surgeon is unfamiliar with the methods employed in arriving at a rating. A brief study of the rating schedule of the Industrial Accident Commission will show the many difficulties encountered when inadequate information is furnished.

The factors to be considered are:

1. The nature of the injury or disfigurement. In Table I of the schedule, each injury, as far as is possible to classify same, is given a disability number and a line number.

2. The occupation of the injured person. In Table II, first division, each occupation is classified and given a form number. In Table II, second division, the case is placed in the proper table for rating, according to the disability number and form number. These tables run from letters A to Q, and are read according to the line number and age; the proper point giving the percentage of disability, which represents four weeks' compensation for each 1 per cent found.

3. The age of the injured person. This it is necessary to know before a rating can be made.

4. The average weekly wage of the injured person.

The foregoing does not present all the features of the schedule, but they would take too much time to discuss.

In single disabilities, such as straight amputations, the rating is a comparatively simple matter. When there are combinations of disabilities, such as amputations, deformities, ankylosis or stiffness of various joints, loss of power or nerve lesion, the rating becomes a much more complicated matter; hence, the necessity for accurate data and measurements.

The lack of adequate information makes the rating of certain cases particularly difficult when the surgeon and the injured person are at points a considerable distance from San Francisco, and on occasions it has been necessary for the injured man to make the trip to the Commission before his disability could be determined. This we wish to avoid if possible, as it often involves considerable personal expense to the man.

In talking with a number of surgeons who have adopted the method of taking proper measurements

of loss of function and making accurate data, we are told that it is not only an advantage in making their final report, but is also valuable in noting the amount of progress, particularly where physiotherapy or work treatment has been employed.

Our idea has been the adoption of simple, uniform methods of examination, not involving the use of elaborate, expensive apparatus. More information can be given in fewer words and our reports are more readily understood.

In the past, there was a very noticeable number of cases sent to this department for ratings where there were marked temporary disabilities aside from the positively known disabilities. This was particularly so in hand injuries, where amputation of fingers or portions of fingers, or other injuries had occurred. Many of these cases presented considerable stiffness, loss of flexion and power in the remaining parts of the hand, for which, in many instances, no treatment had been given. If such a case is rated by this department, the rating is necessarily made on the findings at the time the case is presented.

It has been our policy to withhold ratings in these cases, with the suggestion that the man be given physiotherapy or other treatment. The result in many such cases has been highly satisfactory where treatment has been given. Not only has there been a marked saving to the insurance carrier, but the man, in many instances, has been restored to much of his former usefulness as a worker. This, to our minds, is much more important than the added compensation he would have drawn had he been rated on the original findings.

During the past year there has been a noticeable decrease in cases presented to this department before the permanent stage has been reached, particularly in San Francisco and vicinity, and we believe that there is a much better appreciation of the advantages to all parties concerned.

In passing, we would again like to call attention to the statute of limitations, which runs against the injured man's claim six months after the last medical treatment or last payment of compensation. The man's application for rating and the surgeon's permanent disability report must be in the permanent disability rating department of the Industrial Accident Commission before the expiration of that time, if the injured man is not to be deprived of his rights under the law.

In asking co-operation in these matters, we will also say that any suggestions that will improve our methods will be only too gladly received.

Your attention is invited to an illustrated article by H. L. Langnecker which appeared in the December, 1921, number of the California State Medical Journal, and the circular letter from the permanent disability rating office of the Industrial Accident Commission dated December 7, 1921.

Woodmen of the World Erect Tuberculosis Sanitarium at San Angelo, Texas—This fraternal organization, with a membership of some 800,000 has started construction of a large, very modern tuberculosis sanitarium in Texas. This is to be the first of four institutions of this kind located in different parts of the country.

THE ALIENIST AND EXPERT TESTIMONY*

By EDWARD HUNTINGTON WILLIAMS, M. D.,
Los Angeles

The lack of understanding by the general public about insanity increases the problem of the alienist. To be sure, this ignorance is no greater than about most other obscure diseases. There is this difference, the average man appreciates somewhat his ignorance about diseases in general, but not so as regards insanity. Most persons believe they "can tell a crazy man when they see one"; whereas, in point of fact, their train of reasoning about mental sickness is almost as illogical as that of the patient about other matters. For example, it is generally believed that insane persons possess unusually crafty intelligence. Yet, paradoxically, any sign of intelligence on the part of an accused criminal at the time of his trial is regarded as evidence of mental soundness by many laymen.

Little wonder, then, that trial by jury to determine an individual's mental status is likely to be "something of a joke." Indeed, the results of our archaic method of permitting lay juries to pass judgment on questions of insanity is often a travesty of justice.

A few months ago the peculiar behavior of a certain criminal in the Los Angeles County Jail suggested the probability that he was insane. He was, therefore, sent to the psychopathic ward for observation and in due course came before the insanity commission and was pronounced insane.

The prisoner himself did not accept this verdict, however. Like most insane persons, he believed himself to be mentally sound, and demanded a jury trial. And as this demand cannot be denied in such cases in California, regardless of the findings of the lunacy board, this man was brought to trial before a jury in another court for the purpose of determining his mental condition.

At this trial a number of disinterested observers, as well as the members of the lunacy commission, testified that the man was insane. There was practically no evidence to the contrary presented, except the reiterations of the patient himself. Yet the jury promptly pronounced the man sane, and he was held for trial on the criminal charge.

At this second trial his guilt was proven conclusively and he was duly convicted. But the peculiar indifference of the man during the trial and something in his actions, together with the fact that the lunacy commission had judged him insane previously, led the court officials to believe that the prisoner belonged in an asylum rather than a prison. So he was again placed on trial to determine his sanity.

Again the same witnesses who had testified at

his previous insanity trial gave the same testimony about his abnormal mental condition. But with a very different result. For this third jury declared the man insane.

Thus by the circuitous route of passing through four different courts in three separate trials, this insane man finally arrived at precisely the same goal that was suggested by the lunacy commission originally. The total expense involved in this original insanity trial was about twenty-five dollars. The expense of the three intervening trials totaled several hundred dollars.

Another case that came before the court of Los Angeles County shortly after this one, was that of a man accused of a minor crime. In this case, as in the other, the lunacy commission pronounced the man insane, and the patient at once demanded a jury trial. At this trial six physicians testified to the man's insanity, four of these physicians being men specially trained in observing mental cases. Indeed, the only witness for the defense was the wife of the prisoner, who stated the hesitating belief that her husband was not insane. None of the doctors in this case received any remuneration, or expected to, so that there could be no question as to the sincerity of their belief. Yet in the face of this overwhelming testimony, the jury promptly decided that the man was not insane. He was therefore brought to trial on the criminal charge, convicted, and sent to prison. But after a few weeks of prison life he showed such unmistakable signs of insanity that he was transferred to a State hospital for the insane, and is still an inmate of that institution.

The number of similar cases that could be cited, confining our observations merely to our own courts, would fill volumes. Indeed, they do fill volume after volume of our court records, and represent thousands upon thousands of dollars in expenditures that might easily be avoided by a simple and wholly reasonable change in our process of legislation. And apparently this is fully appreciated by every one connected with the administration of the law; yet nothing definite is done about it. In fact, this curious credulity and ignorance about insanity is frequently taken advantage of by lawyers to pervert justice, as illustrated in the following case:

A certain woman client of a reputable attorney conceived the idea that he had defrauded her. And since she could not convince the authorities that such was the case, she took the matter into her own hands in characteristic paranoid fashion, by discharging a revolver. This landed her in the psychopathic ward, where she was pronounced insane by the insanity commission. But, true to form, she demanded a jury trial.

The new attorney she employed, being wise to the ways of juries, and having had considerable experience with insanity cases, was not fully convinced of the woman's mental soundness, and therefore consulted an alienist. Curiously enough, this alienist, although highly trained in his specialty, still retained a modicum of common sense—a thing that all specialists are popularly believed to

* Read before the Section on Neuropsychiatry of the Medical Society of California, May 17, 1922.

lose in the process of acquiring their knowledge. He assured the attorney that his client was insane.

"But," said the alienist, "you will have no difficulty in winning your case. Regardless of what the lunacy commission and the judge may have thought or may think, the jury will be guided in its opinion by the appearance and actions of the woman herself. Put her on the witness stand and let her talk as much as she pleases and rest assured that the jury will call her sane."

That was precisely what the attorney did. And despite the fact that the physicians of the lunacy commission testified that the woman was insane, and in addition, two judges of the superior court who were placed on the witness stand expressed the same opinion, the jury declared her mentally sound and she was given her liberty—a menace to her community and to herself.

It has been asserted repeatedly that "important murder trials are conducted by the newspapers." Technically this statement is untrue, of course. But it is true that newspaper representatives search out evidence, and express opinions, play up every incident, put on special writers, and make capital and copy for the benefit of the maudlin and morbid.

Furthermore, some newspapers make their own diagnosis of the accused person's mental condition regardless of medical evidence, and naturally this colors the text of the matter they print. Whether intentionally or otherwise, they become partisans.

Since the opinions of most persons, including jurors, are based upon newspaper statements, this influence cannot fail to insinuate itself into the jury rooms. Thus in a measure, at least, criminal cases are influenced by a partisan press.

An evening newspaper in Los Angeles, during a notorious murder trial, printed an editorial which began with this statement:

"The rapidity with which the defense of insanity is undermining the administration of American law suggests a lack at least of moral responsibility on the part of persons other than those under indictment for crime." The implication of the paragraph and, indeed, the entire editorial, is that the plea of insanity is simply a "dodge" to defeat the ends of justice.

It so happened that on the very day upon which this editorial appeared, a certain American officer, bearing the congressional medal for bravery, and famous for the terse retort given in answer to a German demand to surrender, disappeared from a ship at sea. This man, to the casual observation of his immediate friends at least, had shown nothing that would indicate a tendency toward mental aberration. And yet it now appears that he deliberately planned and accomplished self-destruction. There seems to be only one explanation—mental unbalance. And, now that the deed is done, the lay world is ready to accept such an explanation, and shake its pious head dolefully over the misfortune.

But supposing this same "mysterious malady" had manifested itself in the case of this brave American officer as a homicidal instead of a suicidal impulse?—a thing quite consistent with in-

sanity. Then, instead of sorrowful and sympathetic comment, we should have the usual torrent of newspaper condemnation and malediction against the man and the deed, and against any alienist who ventured to explain the act on the ground of insanity.

Or had any one suggested, even a few days before the tragedy, that there was anything abnormal about this man's mentality, the newspapers would have fairly oozed recriminations. Yet I venture to think that any trained alienist would have detected some signs of mental instability.

The existing method of taking medical evidence in murder cases where the sanity of the accused is in question is unscientific and partisan, and tends to discredit the medical profession. Also this method frequently fails properly to serve the ends of justice.

At present the medical experts are employed either by the prosecution or the defense, thus in the very beginning tending to make the whole procedure from the examination of the patient to testimony before the jury, a partisan affair rather than an impartial, scientific attempt to arrive at a correct diagnosis.

The physician finds it difficult when making his examination to obtain the actual facts about the history of the patient, or his heredity, as at present he is furnished only such items as partisan representatives of the law choose to give him. As a result, he is likely to reach erroneous conclusions, although they may be honest ones and entirely justified by the evidence presented.

Wherefore, the statement of the expert witness before the court represents a biased opinion. And this opinion is still further distorted by the cross-examination which does not attempt to bring out actual facts, but is simply a system of cross-heckling in which the wits, partisanship and integrity of the physician are at stake, rather than his actual opinion about the patient or his qualification for giving such an opinion. In short, the procedure is not an honest attempt to determine the physician's opinion, but simply an attempt to discredit it.

It follows naturally that under present conditions the alienist is likely to be suspected of mercenary motives in giving his testimony. And this cannot fail to have a certain influence upon the jury.

The sole function of the physician is to determine whether or not the accused is suffering from disease. He is not concerned with the question of guilt or punishment. But the practical effect of existing methods is to force the physician to share the legal responsibility as to the punishment of the defendant.

Another deplorable thing is the lack of any standard of qualification in the matter of expert witnesses in insanity cases. In effect the law does not regard insanity as a disease in the same sense as it does other pathological conditions. For example, in the case of such relatively easily diagnosed diseases as pneumonia, syphilis, tuberculosis, or malaria, the positive opinion of one physician outweighs the contrary opinion of any number of lay observers. In such cases, the statement of the

village cobbler, blacksmith, carpenter, or constable, that they did not believe a certain person had tuberculosis or syphilis, would have no weight as evidence against the positive statement to the contrary by a competent physician.

Such is not the case in deciding the much more difficult problem about the obscure disease, insanity. In such cases any person may express his opinion and the very bulk of testimony often carries great weight with the jury.

No one will question that our present methods of conducting trials in which the sanity of the defendant is in question are archaic. And yet the remedy is a simple one, easily applied. This remedy has been suggested repeatedly by legal, medical and lay organizations and, with minor modifications, is regarded as the sensible, logical thing to do the country over. In effect it is this: In cases of suspected insanity, criminal or otherwise, the actual condition of the patient is to be determined, not by a jury of laymen, but by a commission of trained observers who are competent to judge in such matters and who are appointed by a judge to determine the one point as to whether or not the patient is insane. The physicians would receive the same remuneration, whatever their decision, so there could be no question about their opinions being influenced by a monetary consideration.

Apparently there is no question that some such arrangement would be more just, and would serve the ends of justice better, than the present system of deciding these matters through the medium of lay juries. And yet, in certain states where repeated attempts have been made to put some such law into effect, it has never been possible to carry it out.

Why? There seem to be four very explicit reasons why such a law always gets clogged and sidetracked in the legislative machinery and fails to get through. These four reasons are as follows:

1. The opposition of certain influential criminal lawyers who would be deprived of an opportunity to show their skill and oratory if such a law were passed;
2. The sensational physician, who is in effect a professional witness, and who would lose the glamour and publicity of a court trial if his statements were confined to an unobtrusive report, confided to a judge;
3. A certain class of judges in the criminal courts who glory in the publicity given by the newspapers in public trials; and
4. The general indifference of the public at large to anything that concerns insanity, except on those sporadic occasions when insanity is the defense in some notorious trial.

These influences, strange as it may seem to the ordinary observer, have been sufficient to defeat the necessary legislative action. And the outlook for the future seems just as uncertain now as it was thirty or forty years ago when these matters were first proposed and accepted by the majority of intelligent thinkers.

GONORRHEA IN WOMEN *

By GEORGE K. HERZOG, M. D., San Francisco

The object of this paper is to re-emphasize the most neglected of all gynecological conditions. Gonorrhea is the fundamental cause of much misery and suffering, loss of time on the part of the patient, sterility, and blindness of the newborn.

Chalfant (Jour. A. M. A., June 3, 1922) discusses some gynecological misdemeanors. Perhaps he considered the neglect of gonorrhea a felony and thus eliminated it from his misdemeanors. Too often pus tubes are removed and a gonococcal pus discharging urethra left untreated. Can it be that some surgeons, in their enthusiasm to remove the pathologic tubes, overlook the importance of the urethritis and allow the patient to continue on her journey, infecting others and spreading the disease?

A woman suffering from smallpox or diphtheria is isolated; but with a gonorrheal discharge she is allowed to remain free to spread infection.

The woman practicing prostitution constitutes an endless chain of infection against which little or no attempt is made to protect the public. A mistaken chivalry shields the woman in most instances and a corrupt or indifferent political condition fails in the discharge of an important duty.

Physicians have made many advances in the prevention and cure of disease, but progress in treating gonorrheal conditions is at a standstill. The general treatment is practically the same as it was fifty years ago. The germicides of that period are still used, and the failure of that period still exists. Occasionally a new drug, such as mercurachrome or acriflavine, is put forward, but after an honest trial, it falls into the same category as silver nitrate, sulphate of zinc, bichloride of mercury, and potassium permanganate. Slow progress in treating gonorrhea in women is in part due to the fact that the profession rarely sees the patient in the acute stage.

The man with a slight urethral discharge usually consults a physician immediately, but the woman seldom comes under our observation until the disease has spread to the cervix, the body of the uterus, and sometimes the tubes. A slight urethral discharge with burning on micturition does not worry the female, while the male considers these symptoms worthy of medical attention.

The patients seen in both private and in clinical practice are usually the advanced cases with the glands of Bartholin, Skene's glands, the cervix, and often the tubes involved. It is in these cases that a felony is committed by some surgeons in removing the interabdominal condition and leaving the disease in the vulvo-vaginal tract. To cure the patient, the glands of Bartholin should always be excised, Skene's glands should be opened and cauterized, not with drugs, but with the thermocautery, and the urethra should be injected with a strong silver nitrate solution. The cervix should

* Read before the San Francisco County Medical Society, August, 1922.

be dilated and here again the cautery liberally applied.

Under this treatment the patient is cured and the source of infection has been removed. This technique has been recommended for some time and prevails in some larger clinics, but is often neglected by many physicians. The average woman suffering from gonorrhea is given the usual washes and is irrigated perhaps a few times at the office by the physician. The patient tires quickly of this treatment and discontinues it until the abdominal symptoms drive her to the surgeon. The knife and cautery applied as I have directed would often avoid the necessity of abdominal surgery.

The principal objection raised against cauterizing the cervix is the destroying of the endocervical glands with consequent sterility, but usually the woman is already sterile, for the tubes are infected and occluded. Another objection to the cauterizing of the cervix is that a stricture with menstrual disturbances or obstetric obstruction may result. This is only problematical. I have never seen such a result. Even in those cases where the disease has not reached the fallopian tubes, I think it is better to remove the cause and not worry about the probable effect. Objection has also been raised against the cicatrix that occasionally remains about the cervix after the cautery, thus increasing the danger of malignancy. However, until more definite proof is produced, this objection should not be considered.

It is only too often that the physician fails to diagnose gonorrhea because he does not find the gonococcus. The fault lies usually with him and not with the laboratory technician. It is necessary usually to milk the urethra, not gently, but with considerable pressure. The pus should be expressed from Skene's glands. The surgeon likewise should locate the glands of Bartholin and again utilize force to obtain the pus. The cervix should be very carefully wiped off and it should be sponged with sterile water a half dozen times, and then when massaged the discharge should be collected on a slide and examined. Several slides should be made on different days before the diagnosis is definitely established.

Leucorrhea is very often of gonorrheal origin, and should be so considered where the patient has had marital relations, until proved otherwise. Particularly does this hold true in the young woman. One can safely say that an abscess of the gland of Bartholin is always gonorrheal, and a urethral discharge is of the same origin until proved otherwise.

Urethral caruncle, of gonococcic origin, is often seen in improperly or inadequately treated patients. I have had unusual success with the use of Skene's urethroscope and the high-frequency spark in relieving this condition. This treatment may be carried out in the office under local anesthesia.

Peri-urethral abscess in the female following gonorrhea is a troublesome and unsatisfactory condition, particularly when the abscess is so close to the internal sphincter that urine may be mixed with the pus.

Internal urethrotomy does not relieve this condition, while external urethrotomy is very apt to leave the patient with a difficult and troublesome urethro-vaginal fistula. These conditions may be treated with silver nitrate applications and massage. The massage is the greatest help, but in some patients surgery becomes necessary.

Young women in particular are prone to neglect to call on the physician until the pelvic organs are involved and surgical interference is required.

I have not dwelt upon the subject of pelvic complications following gonorrhea of vulvo-vaginal tract as the therapy here is more definite. Acute salpingitis requires rest and ice-bag; old pus tubes should be removed; pelvic abscesses opened and drained; while a general peritonitis should be treated as that of any other origin.

In conclusion, I wish to say that the radical treatment of gonorrheal vulvo-vaginitis, namely, the excision of the Bartholin glands and the direct application of the cautery to the urethra and cervix have given most gratifying results.

Social Service Investigators—None but reactionaries will deny the necessity for many of the existing social agencies dedicated to the prevention and mitigation of sociological problems that seem to multiply with the advancing years. Those who think far enough ahead, however, may sense certain dangers in connection with social relief that may approach the border-line of paternalism and lead far afield from the old-fashioned virtues of self-reliance and independence. It is at once apparent that most of the problems referred to have a close connection with health and sickness.

In recent years most hospitals, many dispensaries and a great majority of civic or social agencies offering free medical or surgical treatment have engaged nurses as social workers or investigators. The problem of eligibility for free sickness service is as old as the first "free dispensary." When employed as a social investigator, the graduate nurse who has never engaged in the private practice of her profession, or who has for a number of years been in a salaried position, has frequently lost touch and sympathy with the income-producing phases of the practice of medicine; and further, if improperly trained in her social work, her choice of beneficiaries for free sickness service may often be sociologically unfair to the beneficiary and to the neighborhood physicians, who are called upon to render twenty-four-hour-a-day sickness service to all, regardless of ability to pay.

Adjustment to changing conditions is necessary for the medical profession. We must come to think more and more of our responsibilities to our community; but in the meantime we must make some effort to stay the flood of uplifters, who too frequently pauperize their beneficiaries and at the same time deprive members of the medical profession of equitable opportunities for the earning of income adequate to the provisions of home, office and educational equipment essential to good medical service.

The average agency offering free sickness service operates but a very few hours each week. In the meantime, people of the community concerned are dependent twenty-four hours a day upon the service of the neighborhood physicians. Enthusiasts for social relief should therefore take cognizance of the fact that the withdrawal of a large number of possible patients from the clientele of the physician of a community may sooner or later result in a further diminution in the number of local physicians available for twenty-four-hour-a-day service.—W. F. Donaldson, Pennsylvania Medical Journal.

SO-CALLED CHAUFFEUR'S FRACTURE*

By PHILIP STEPHENS, Los Angeles

It might seem to the casual observer, in this day of mechanical advancement and perfection of the automobile, that the so-called "chauffeur's fracture" would be scarce, or almost absent from the list of our fracture cases.

Recently, in getting together a collection of wrist fracture cases for a symposium held by our Industrial Section, I was struck by the many, or, I might say, the majority of my cases which had as their causation the cranking or backfiring of an automobile. A great many of these cases were typical Colles's fractures, or what I believe to be described in most textbooks as "classical" Colles's fractures, but which are not the radial fracture described by Colles of Dublin. We find the same types of wrist fracture produced by automobile cranking that we have always had and still have from falls upon the outstretched hand.

In spite of the advent and general use of self-starters, their use is mostly limited to passenger or pleasure cars, while the heavy trucks and light delivery cars must still be cranked. They are capable of producing many injuries other than wrist fractures, ranging from these to many varied and unlooked-for conditions, due either to direct violence or the handle of the crank being wrenched violently from the hand.

These, however, will not be discussed, but only the bony injuries to the wrist—usually radial head, and termed chauffeur's fracture. I am free to admit the term is neither correct nor scientific, and is used only to designate the cause of many types of fracture, anatomically and mechanically, which occur as the result of this most potent and usually direct force delivered to the wrist. To me, it is remarkable how many varieties occur, but this is easily accounted for, considering the mechanical factor of the production.

Backfiring, or the explosive force which tends to suddenly change the direction of the automobile crank or handle, when being carried around in a circle, may happen at approximately four points in the circle in which the handle is being carried. This being the case, the hand grasping it may be in a neutral position, it may be flexed on the wrist, or dorso flexed. These may also be altered by the position assumed by the operator standing in front of the car, certain postures tending to bring the arm in supination, or the reverse, pronation, all of which receive the force transmitted in a different line, and produce different anatomical results, varying as widely as the many positions assumed.

It is plain to be seen, then, that the mechanical factors in the production of these injuries are practically the same as those which have always been described in our textbooks as the cause of most of our wrist breaks, and this long before the advent of the automobile, viz., a fall with the hand outstretched, catching oneself on the dorso flexed hand, and modified less commonly by alighting on

the flexed hand, with arm thrown to the side of the body in position of supination, or more toward the front in falling forward with the arm in pronation.

Time will not permit a review of the many types of wrist fracture produced by mechanical force. However, a few of the common forms will be discussed, with their treatment and progress, from the industrial standpoint.

I think I am correct in saying that the great majority of skeletal injuries of the wrist due to automobile starting are rather minor in character, if properly recognized and properly treated; that the majority are small fissures, with no deformity or defect in alignment or position. The commonest of these, perhaps, is the fracture of the radial styloid process, simple in its aspect when the small fragment is not displaced, but important when we consider the fact that our fracture line runs into and impairs an articular surface in its apposition and articulation with the metacarpals.

Then there is the minor fracture, transverse usually, in young subjects, following the epiphyseal line, and which might be properly called epiphyseal separation.

More nearly simulating this is the so-called cortical fracture, in which the cortex is fractured, there being no disturbance of the periosteum, which, unless the radiograms are unusually good, will not show until there is a liberal amount of callus thrown out, and this in early pictures is very likely to be overlooked. These facts, I believe, are of great importance from an industrial standpoint, and in my experience I have had several cases in which I had made a diagnosis of a simple sprain, and in which the pain, swelling and loss of function persisted. Later pictures showed plainly a distinct line of callus, proving an actual fracture had existed.

Perhaps the most important lesion is the so-called typical or classical Colles of the wrist, being a fracture within the last inch of articulation—may be transverse or oblique, the lower fragment being displaced backward so that the articular surface looks downward and backward. This fracture may be complicated by a fracture of the styloid of the ulna, or even of the scaphoid. The latter particularly should never be overlooked. This type of deformity produces the typical silver fork, spade or bayonet deformity so readily recognized. To me, the worst form of this peculiar variety is where the line of fracture is extremely oblique and by reason of this extreme obliquity the correct position is very difficult to properly maintain. We may have practically the same line of fracture, but with displacement downward and forward, sometimes called reverse Colles, but really described and properly named by Dr. Smith.

These forms are also complicated with comminution, or added lines of fracture running into the articular surface of the head, making T or H fractures.

But perhaps the most important of all from the standpoint of treatment, loss of time in industry and bad functional results, is the impacted variety

* Read before the Section on Industrial Medicine and Surgery of the Medical Society of California, at Yosemite National Park, May 15, 1922.

in older subjects. These very often, in spite of our best efforts, result in impaired flexion, pronation and supination, by reason of the usual shortening of the forearm on the radial side. Instead of having a "half moon" concave joint surface with which to articulate, with the composite-convex surface of the metacarpals, we have a flat-square surface which does not fit, and deformity, pain and disturbed function result.

As to deformity, I have spoken of the silver fork type, which is so unmistakable that we may all recognize it at sight; but I believe the most common and least spoken of is where the entire hand has the appearance of being shifted toward the radial side, with an undue prominence of the ulnar styloid and with a typical fullness and obliteration of the wrinkles over the front of the wrist. Crepitus is rare, and in these days of Roentgen ray we should not attempt to elicit. Pictures should be carefully taken in both planes, and in obscure cases both wrists should be rayed for comparison.

Pain is rather characteristic in one point only that I have any knowledge of, viz., is markedly increased by any manipulation of the thumb.

Treatment—As a great majority of fractures of the lower end of the forearm are simple and without displacement, the treatment is comparatively simple. Any simple single splint may be applied to the palmar surface, reaching from elbow to middle of palm, padded to conform to the normal arch of the forearm. It should be held in place by adhesive straps at wrist and below elbow, and firmly bandaged over all.

The "classical" fracture, however, is more difficult to manage, and here we find that the anatomy and mechanical force used in the causation of the fracture must be well borne in mind in order to properly reduce and maintain this correction comfortably and gain best results with perfectly useful, functioning wrists.

I believe that more failures and deformities are the direct result of improper or insufficient attempts at reduction than any other factor. Practically all of these fractures are easily diagnosed, even before we get our picture, and the vast majority of patients need a short anesthetic, either gas or ether, in order for the surgeon to use the best methods and manipulation to correct the deformity. Thus, the task is fairly easy, when it is kept in mind that the deformity must be increased before the short fragment is set in place. To this end, with traction and the hand, and the thumbs firmly over the dorsal surface of the radial head, the patient's hand is firmly forced back and out, then down and in, which usually drives the short fragment downward into place, and the original deformity is then brought, roughly speaking, upward and outward. The surgeon should correct, or over-correct, by maintaining a position with some retention, the position tending downward and inward, viz., flexion and inclination downward and toward the ulnar side. There are many ready-made splints manufactured and sold with this conformation in mind, and very often in emergency can be carried and used to advantage—the Walker, of papier mache, molded and perforated aluminum,

etc., etc. However, the molded plaster, I believe, is ideal, especially in those cases where the obliquity of the fracture line is great and there is a tendency for the short fragment to displace backward.

In order to maintain position between reduction and application of splints, a roller bandage may be lightly grasped by the patient, or, if assistance is not obtainable, the arm may be placed on the patient's thigh, the hand pulled firmly over the three-quarter flexed knee, and the posterior one-half of the splint be molded on in this position.

A circular plaster cast should not be used, or, if used, with extreme care, or cut along both outer and inner borders, even before perfect solidity of the cast is obtained, in order to provide for swelling and frequent after-inspection.

Anterior and posterior splints of board are good and easily applied, preferably with a tendency toward pistol shape or slight angulation toward the ulnar side, and proper padding of the palmar half under the wrist is made to conform to the radial arch. The wrist should be inspected often, and at each inspection, if possible, the apparatus removed and the arm gently bathed with alcohol.

Early passive motion and massage are extremely important, especially for the aged, or even those beyond adult age, as I believe the prolific source of bad results, next to improper reduction, is prolonged splinting, without proper passive movement and massage.

In a great many cases of the impacted variety, complicated with comminution of the head, fractures and ulnar styloid, especially in aged patients, radial shortening will result, together with tenosynovitis, prolonged convalescence, and eventually some permanent disability. In this event, the surgeon must begin early, with all energy, to apply means at hand to lessen this deformity and loss of proper function, with early massage, manipulation, hydrotherapy, etc.

Three weeks is a fair average for the wearing of splints. No support, wrist band, or adhesive strapping is especially needed unless for the psychic effect on the patient, and this phase of treatment of the average industrial case is one that must be carefully considered.

Operative interference for old deformities, bad results, poor functioning, shortening of radius with resultant defects, are resorted to, but with, I am free to say, not very brilliant results in my own experience, and is perhaps an additional incentive to increased effort in treating them properly in the beginning.

The Thomas wrench is often useful, if followed by careful massage and hydrotherapy, in maintaining the motion gained by the force used to correct deformity.

In pronounced impacted cases, with shortened radial side, a resection of a short portion of the ulna often restores the proper relation of the two bones forming the articular surface, and thereby improves flexion and the related movements of the wrist.

An osteotomy of the head of the radius is often of great use in cases of deformity where there appears to be a lateral shifting of the entire hand

toward the radial side, with an accompanying prominence of the ulnar head.

Operative interference, with removal of one or more fragments, is usually necessary in cases of fracture of the scaphoid or semi-lunar, before improved or perfect function is obtained.

I believe the average conscientious surgeon of long experience in the treatment of wrist fractures, when reviewing and summarizing his cases carefully, sees some results which cannot add to his ego, and he will feel more keenly the responsi-

bility of caring for a case in hand. However, he will probably have arrived at a sound and sane conclusion which has caused him to fairly well standardize his procedure, as follows: Complete reduction immediately after the injury, the appreciation of the factors of treatment and after-treatment, very early motion, and short time of immobilization. When these principles are carefully and conscientiously carried out he may feel that the majority of his wrist fracture cases will result satisfactorily.

REMOVAL OF PUS TUBES AND SAVING OF THE OVARIES, AND SUSPENSION OF THE UTERUS.

By F. P. CANAC-MARQUIS, M. D., San Francisco

The essential features claimed for this operation are as follows:

(a) Removal of the pus tubes, including a small portion of the uterus at their point of attachment.

(b) Protection and preservation of the ovaries by means of covering them with broad ligament.

(c) Fixation of the uterus in a proper position by means of fastening the round ligament to the abdominal wall.

The technique of the operation may be best described by reference to the figures.

Kocher forceps are now thrust through the apo-

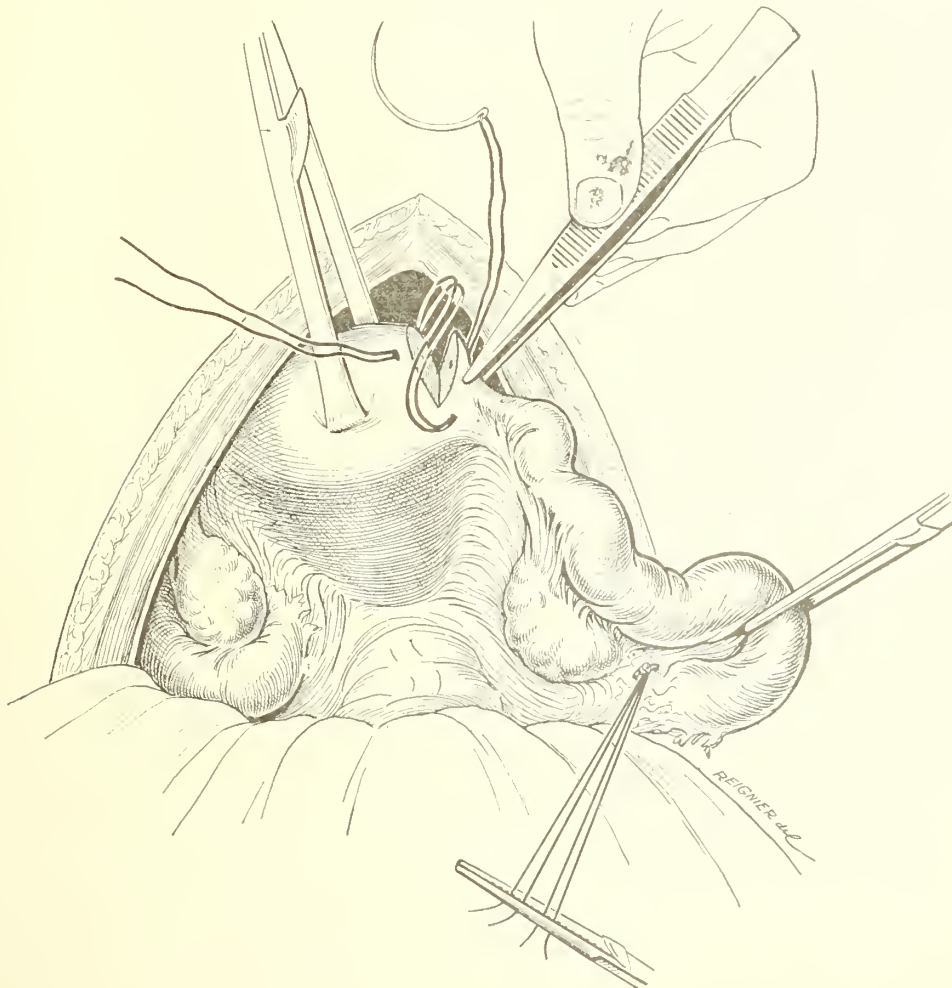


Fig. 1

Fig. 1—The ovarian artery has been ligated and the removal of the tube begun. Note that a V-shaped piece of the uterus has been excised at the tubal attachment.

This eliminates the occurrence of the post-operative pain so often observed and due to the small stump of the tube allowed to remain.

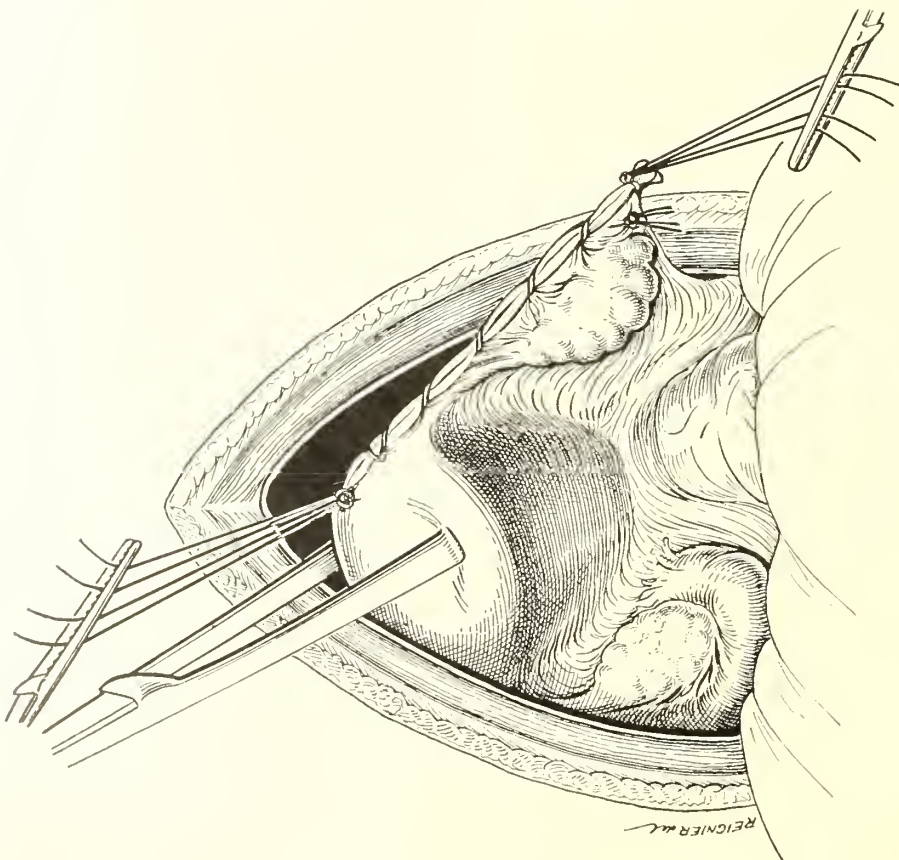


Fig. 2—The cut edge of the broad ligament has been sutured with continuous catgut.

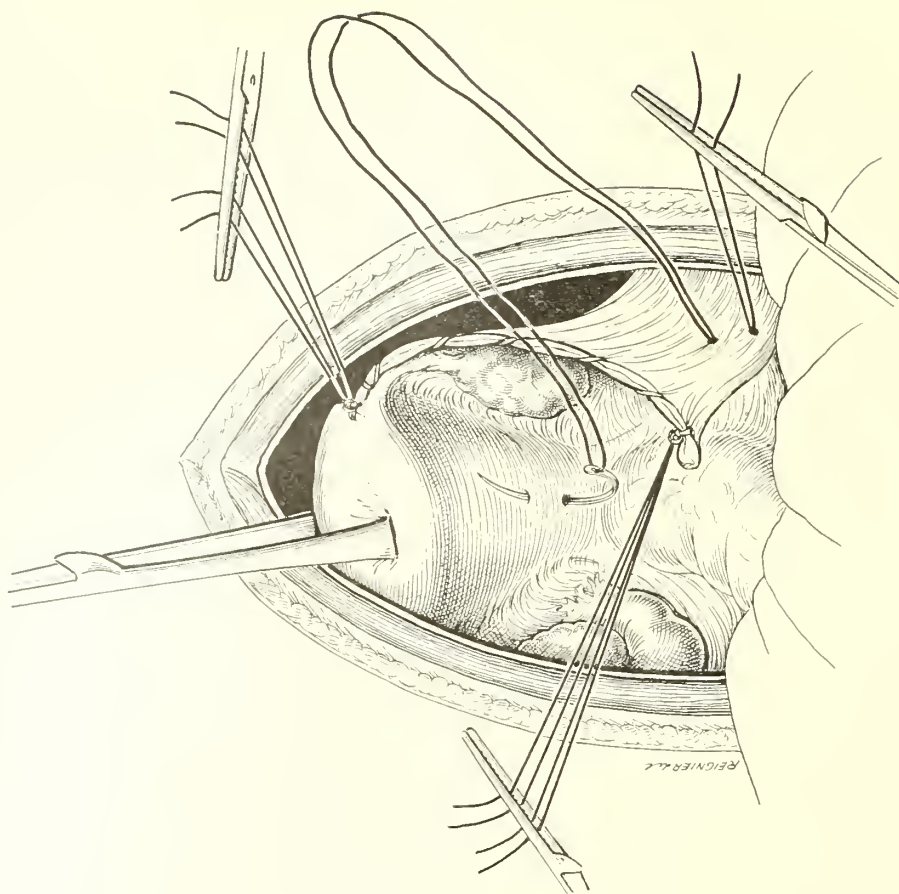


Fig. 3—The broad ligament and the posterior surface of the uterus have been transfixed by the suture preparatory to covering the ovary by the ligament.

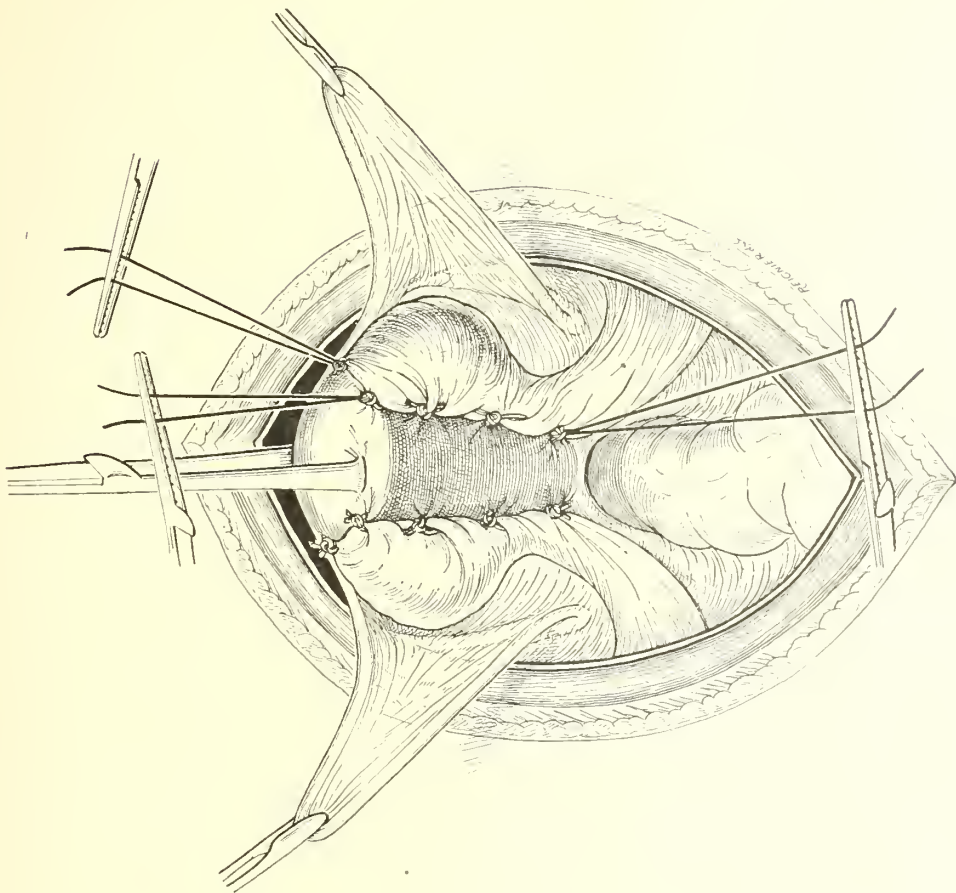


Fig. 5
Figs. 5 and 6—Sutures complete on both sides. The ovaries are now completely protected and the peritoneal adhesions and the new circulation bring about a regeneration of the ovaries in their natural environment and keep them in a healthy condition, even though only a part of the ovaries remains. It can be encapsulated in the same way, providing, of course, it be healthy.

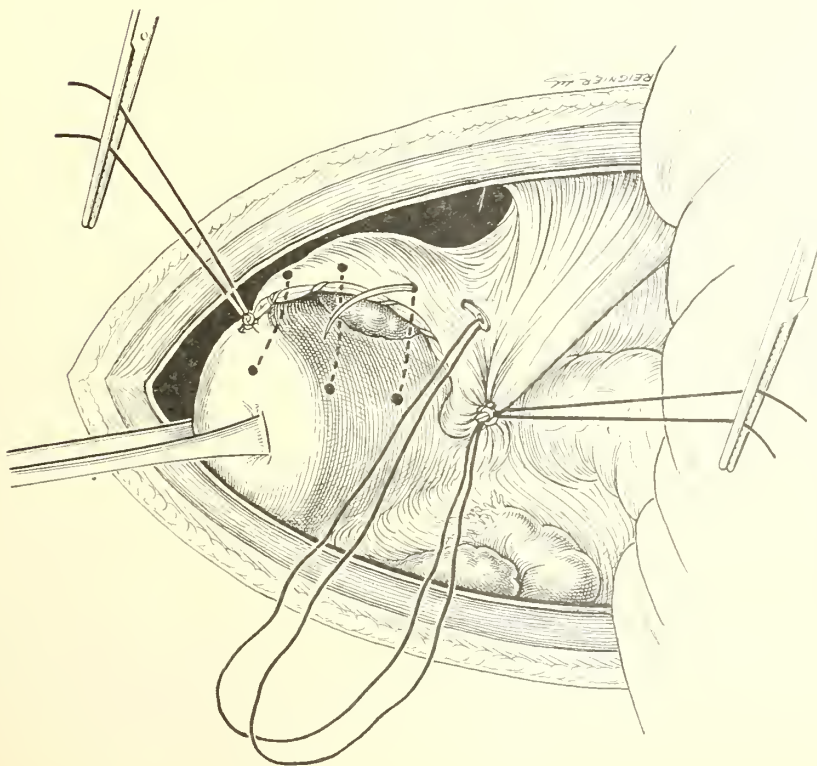


Fig. 4
Fig. 4—The process begun in Fig. 3 is being continued. The edges of the broad ligament being invaginated so as to leave no raw edges.

neurosis, muscle, and peritoneum, about six to eight centimeters from the edge of the abdominal incision, and made to grasp a loop of the round ligament which is held by a second pair of forceps. The loop is then drawn through the wall and sutured to the aponeurosis as shown on the left side of this wound. This last step will correct any uterine displacement that may be present and will cause no further trouble to the patient. This method of fixation will also radically cure complete prolapsus uteri providing anterior and posterior calporrhaphy are done prior to the suspension if necessary.

In cases where pus is encountered I made it a rule on opening the abdomen to introduce from four to eight ounces of sterile camphorated oil. If the pus tubes break, the pus will float on the oil and it can be easily sponged out.

Oil is the best lubricant to prevent any of the septic matter being absorbed by the peritoneum. When everything has been removed or repaired, I put in more camphorated oil and sponge it out well.

In all cases where the camphorated oil is used a drainage tube should be introduced, the two openings facing the pubis. Drain, size used Fig. 7.

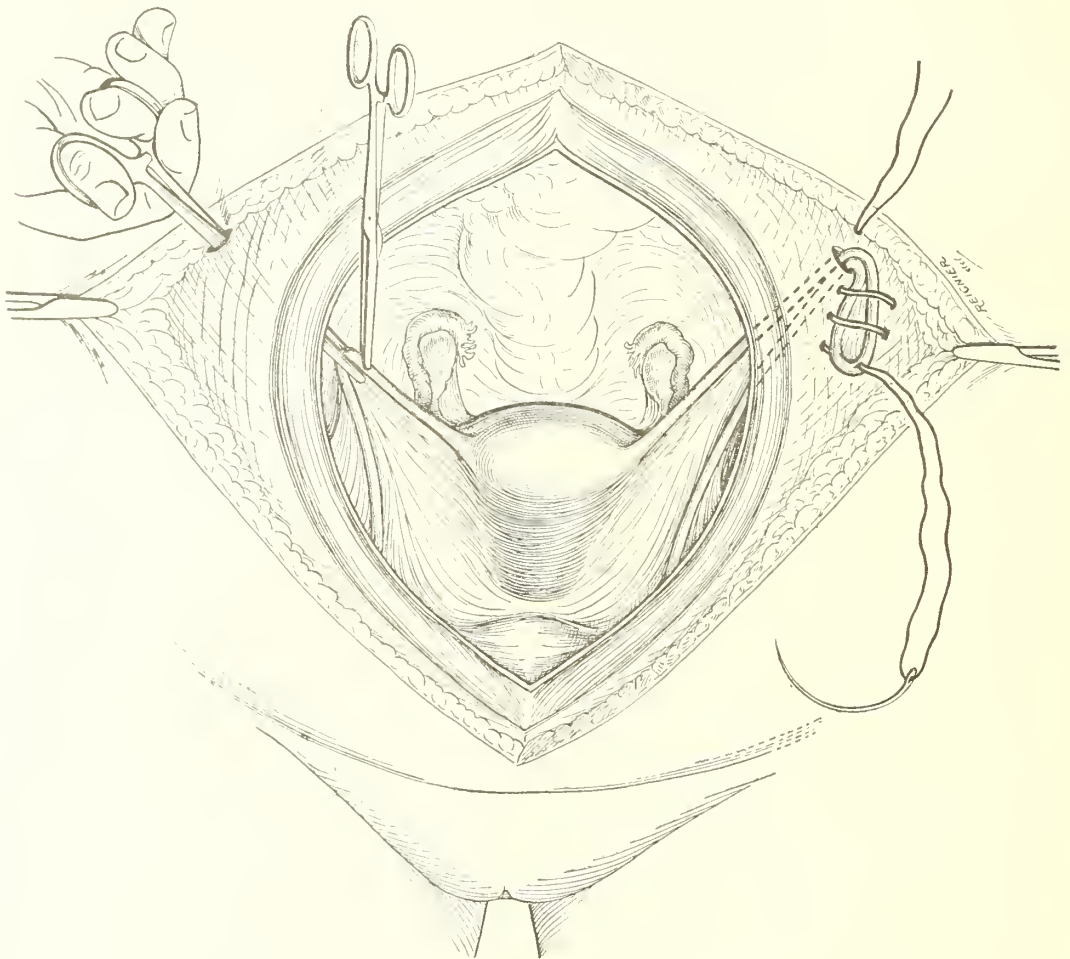


Fig. 6



Fig. 7

PRE-OPERATIVE EXAMINATION*

By F. F. GUNDRUM, M. D., and J. B. HARRIS, M. D.,
Sacramento

To the physician, in the smaller communities at least, come for examination prospective patients of surgical colleagues. A goodly portion of these appear without the knowledge of the surgeon and without informing the physician of their previous surgical advice. They desire to know whether an operation is indicated, how much benefit is apt to result and how much risk they run of dying. The physician, although having no advantage over the surgeon in answering the first and second, should perhaps be qualified to give a more adequate estimate as regards the third question.

F. W. Birtch, in discussing the 1914-15 reports of the Massachusetts General Hospital's post-operative deaths in chronic surgical condition, says that in one-third death was due "to the lack of pre-operative diagnostic skill to ascertain reserve power of other organs, or extent of primary disease or number and influence of concomitant disease." He advocated the intensive group study of all chronic cases and reported results of a series at St. Luke's Hospital, San Francisco. This study did not stress surgical risk or endeavor to put it upon a mathematical basis. Others have laid emphasis upon the blood pressure as a criterion for estimating operative risk.

Miller published a study of one thousand patients classified according to the rule promulgated by Moots: "When the pulse pressure divided by the diastolic pressure (PP/DP) is greater than 75 per cent or less than 25 per cent, patient is probably inoperable," which rule Miller praises as having been useful to him.

For some years it has been our custom to refer very ill or handicapped surgical patients for medical appraisal before operation. Until the last two years we had made no systematic effort to find out how much danger was involved in an ordinary surgical procedure and what findings were to be looked upon as of more sinister significance in evaluating operative risk.

In this study, patients to be operated upon were given an ordinary clinical examination and an effort made to express in per cent the result. Record was made of sex; age; haemoglobin; blood pressure (systolic, diastolic, and pulse); heart (size, rate, rhythm and valves); lung and urinary findings. A number indicating the clinical estimate of the status of the patient was set down on the chart. At first we tried to make this number proportionate to the published percentage death rate for the various operative procedures. This proved unworkable because of the physician's frequent unfamiliarity with this method. The number set down then represented the estimated vitality of each individual, a normal being 100 per cent. After the

patient had left the hospital, the charts upon which the anesthetic, surgical procedure, operative behavior, and post-operative course had now been entered were summed up. Sex and age were found of no significance and excluded; sex having no bearing at all and the matter of age being adequately covered by clinical findings. Temperature in itself was found to have little bearing, those patients with fever being judged upon other grounds. The pulse rate varied from 52-130. Except in two heart failure cases, the rate depended obviously upon fever, goiter, or neurosis. Urine examination was made in all cases. This did not prove very helpful; we had no patients suffering from diabetes or parenchymatous nephritis. Where albumin or casts were found, acute inflammation elsewhere with fever accounted for these findings in the low blood pressure cases; or the circulatory status, blood pressure particularly, served as an index to the amount of disability present.

There were 325 patients examined in which operation was postponed in 9 (3 per cent), 2 because of acute heart failure and 7 because of acute chest conditions. Three hundred and sixteen patients were operated upon. Mortality, 7 or 2.2 per cent. Two of pneumonia, both after excision of a ruptured appendix; two of peritonitis, one from a gangrenous ovarian cyst, and one from soiling in the excision of a cancer of the rectum; one of hemorrhage in a myomectomy; one of empyema of gall bladder; one of Addison's disease after incision of a large lumbar abscess. These may be classified somewhat according to the Massachusetts plan as:

1. Surgical failure, 2 (28 per cent), i. e., the hemorrhage and one peritonitis due to soiling.
2. Poor medical judgment (14 per cent), i. e., the Addison's disease.
3. Surgical calamity, 2 (28 per cent), i. e., the pneumonias.
4. Unavoidable because of condition present, 2 (28 per cent), i. e., one peritonitis (gangrenous cyst), and one toxemia (gall bladder).

This classification however, gives a very inaccurate picture of the problem. Five of these seven patients were operated upon for the drainage of pus and are therefore to be classed as emergency surgery. They are included here only because they were "estimated" before operation. The death rate thus appeared to shed small light upon the adequacy of the pre-operative method of estimating risk.

Post-operative disturbances of circulation and lungs gave more interesting results when compared with the protocol from the antecedent examination. The number and nature of pre-operative abnormalities with post-operative disturbances follow:

Heart pre-operative findings—Normal, 219 (69 per cent); abnormal, 97 (31 per cent); abnormalities included increase in size, 78 (25 per cent); arrhythmias, 13 (4 per cent); sinus, 10; extrasystoles, 3; murmurs, 38 (12 per cent); diastolic, 4; systolic, 34 (of these, 15 were thought inconsequential).

* Read before Butte County Medical Society, December 14, 1922.

Post-operative circulatory disturbances were noted fifty-one times (16 per cent). These were found to be distributed as follows: (a) With normal sized heart 16 per cent; enlarged heart 19 per cent. (b) With regular heart 48 (15 per cent); irregular heart 24 per cent. (c) With normal sounds (16 per cent); with murmurs (18 per cent).

Thus the heart abnormalities, though considerable in number, produced very little effect upon post-operative course.

Lungs were normal 237 times (75 per cent); abnormal 79 times (25 per cent). These abnormalities were divided clinically into fibroid apex, 24 (30 per cent); active tuberculosis, 8 (10 per cent); bronchitis, 21 (29 per cent); emphysema, 25 (31 per cent); basal dullness, 1.

Post-operative disturbances of the lungs were noted 44 times (14 per cent). Of the 237 normals, 19 (8 per cent), showed some pathological changes in the lungs; bronchitis in 13 (6 per cent); pneumonia in 3 (1 per cent); pleurisy in 3 (1 per cent). Of the seventy-nine with abnormalities of the lungs, 25 (37 per cent), developed post-operative disturbances. These were bronchitis, 18 (23 per cent); pneumonia, 7 (9 per cent).

Distributed among the four groups we find: Fibroid apex was followed by bronchitis 8 per cent, pneumonia 4 per cent; pulmonary tuberculosis by bronchitis 0, pneumonia 12 per cent; bronchitis by bronchitis 33 per cent, pneumonia 14 per cent; emphysema by bronchitis 36 per cent, pneumonia 4 per cent; basal dullness by bronchitis 0, pneumonia 100 per cent.

Thus, although lung abnormalities were found in less number than those of the heart, post-operative events attach to them a graver significance. Bronchitis and emphysema seemed especially apt to cause trouble. The proportion of lung disturbances in those showing even slight abnormalities was over four and one-half times as great as among those with normal lungs.

Blood Pressure—Systolic varied from 62-210; arbitrarily divided into 3 groups: 141-210, mm Hg, 30 (10 per cent); 91-140, mm Hg, 269 (85 per cent); 60-90, mm Hg, 17 (5 per cent).

Post-operative circulatory disturbances: 141-210, 5 (16 per cent); 91-140, 44 (16 per cent); 60-90, 4 (25 per cent).

Thus systolic pressure higher than usual was not reflected as a surgical handicap. Pressure below 90 was somewhat more dangerous.

Diastolic pressure: 91-130 mm Hg, 31 (10 per cent); 66-90, mm Hg, 251 (79 per cent); 30-65, mm Hg, 35 (11 per cent).

Post-operative circulatory disturbances: 91-130, 3 (19 per cent); 66-90, 39 (15 per cent); 30-65, 8 (23 per cent).

Again a moderate increase in trouble is indicated among the patients with low diastolic pressure.

Haemoglobin—Haemoglobin varied from 62-100.

There were no very low readings in this series, the lowest being 62 per cent. They were divided into two groups: Haemoglobin 81-100, 282 (89 per cent); 60-80, 34 (11 per cent).

Post-operative disturbances were as follows: 81-100, 58 (20 per cent); 60-80, 13 (38 per cent).

These figures again indicate a noteworthy increase in the lower levels.

Anaesthetics used were: Gas in 33, and ether in 283.

Post-operative lung trouble showed for: Gas 12 per cent, and ether 14 per cent, an insignificant difference.

Operations were: Abdominal, 118; pelvic, 146; extremities (included thyroid and breast), 50; chest, 2. Duration of operations 5 to 90 minutes; average 40 minutes.

Shock was also studied, but without reaching definite conclusions.

In endeavoring to reduce our pre-operative examinations to an arithmetical figure, we made use of several formulae. The application of Moots' method showed: "Operable," 289, of which 5 died (2 per cent); "inoperable," 27, 2 died (7 per cent (one of these from surgical peritonitis). Not a very helpful classification.

We tried many homemade rules, such as "subtract 1 per cent from the general average for (1) bloodpressure above 150, (2) haemoglobin below 80, etc., but were unsuccessful in achieving any "rule of thumb" which covered the various factors and gave at all reasonable figures.

The clinical rating stood the best test, though here we gave too much weight to heart and not enough to lung abnormalities. For comparison they were grouped as follows: Over 75 per cent, 250, died 1.6 per cent, post-operative trouble 19 per cent; 51-75 per cent, 49, died 2 per cent, post-operative trouble 32 per cent; 0-50 per cent, 17, died 12 per cent, post-operative trouble 60 per cent.

CONCLUSION

1. Ordinary surgical procedures well done, exhaust but a small percentage of the vitality of the average patient.

2. Heart abnormalities (without heart failure), did not seriously increase the surgical risk.

3. Bronchitis and emphysema proved to increase notably post-operative dangers.

4. High blood pressure *per se* did not indicate increased danger, but low pressure increased the post-operative risk.

5. Low haemoglobin values added to the surgical risk.

6. Moot's rule was useless in our hands.

7. We were unable to devise any formula for indicating operative risk.

8. Clinical judgment based upon thorough examination was the best index to surgical and post-operative risks.

EPIGASTRIC TUG *

By MARK L. EMERSON, M. D., Oakland, Cal.

Epigastric tug is not uncommon but frequently it is unrecognized. Neither the patient's symptoms nor the physical findings fit the more commonly thought of surgical pictures. The pain and discomfort are entirely disproportionate to what one is sometimes able to demonstrate, yet the lesions disclosed at operation, and the subsequent relief are sufficient proof that epigastric tug on the falciform ligament may be responsible for pain more often than one might imagine.

Upon examination, all one is able to find in the condition referred to is a small subcutaneous tumor in the linea alba, between the umbilicus and ensiform cartilage. Indeed, on account of their small size, it is not always possible to palpate these tumors; but from the symptoms, and as a result of having epigastric tug in mind, one may, having excluded other conditions, infer their presence. The small tumors under discussion are sometimes spoken of as epigastric hernia, or preperitoneal areolar tumors, or simple lipoma. The condition under discussion, however, is not an epigastric hernia. Before arriving at a diagnosis of epigastric tug, it is necessary to eliminate as possibilities all those other types of hernia which may occur in the upper abdomen at or about the median line, ventral hernia, umbilical, post-operative, post-parturient, traumatic and other well recognized hernia should be excluded. Consideration in this discussion is therefore confined to the small areolar tumor coming through the linea alba between the umbilicus and ensiform cartilage, and commonly termed epigastric hernia.

A search of medical literature reveals little concerning the subject. Quervain says: "If the diagnosis of epigastric hernia were always made in time it would prevent many so-called dyspeptics wasting time on treatment for indigestion, for a simple surgical measure could at once restore the patient to health."

Maskowitz, during the past few years, has diagnosed hernia of the falciform ligament a number of times and reports having operated upon over twenty cases similar in character to those under discussion.

Considering for a moment the anatomy: The linea alba, in the median line of the abdomen, runs from the ensiform cartilage to the pubes. It is an aponeurosis formed by the sheaths of the recti muscles. Broad and distinct above the umbilicus, the linea alba diminishes in the lower abdomen and before reaching its insertion in the pubis almost or quite disappears, leaving the recti muscles nearly in contact with each other. The fibres of the linea alba run longitudinally, obliquely and transversely. The transverse fibres are the strongest, and not infrequently have gaps between them. The openings, or gaps, between the transverse fibres of the linea alba are the site of the type of hernia responsible for the tug, and they allow the subperitoneal fat to escape but not always to return.

At operation the herniated fat is found to have a constricted pedicle firmly grasped by the fibres of the slit in the linea alba. The peritoneum does not protrude and is separated from the linea alba by the transversalis fascia, but between the two is a certain proportion of fat, and it is this, the next adjacent tissue to the weak spots in the linea alba, that force their way through and become entrapped.

The falciform ligament is a reduplication of peritoneum. The lower attachment of the falciform ligament is along the line of the linea alba, from the umbilicus to the ensiform cartilage, and in its attachment spreads both ways from the midline, but more to the right than the left. The adipose tissue contained within its broadened layers, anterior triangular attached surface, is in close contact with the transversalis fascia. Given therefore an opening, or number of small openings in the transversalis fascia, the first tissue that could possibly be forced through would be the preperitoneal fat within the folds of the falciform ligament.

The openings in the transverse fascia are very small, and the component parts of the linea alba strong and inelastic, which may explain why the majority of these so-called epigastric hernia are small. Reviewing the mechanism of formation. Quervain states that the first protrusion is a mere lobule of fat, which increases by growth. If, however, the hernial development is greater than the fatty proliferation, or contains peritoneum or omentum, the case then becomes one of epigastric hernia. It is not possible to differentiate definitely between a true hernia, with reducible omentum, and a subserous lipoma.

The writer is of the opinion that the first cause of the small areolar tumor in the upper linea alba is encouraged by the blood vessels passing through the transversalis fascia and aponeurosis of the linea alba. Prolongations of the fascia follow these blood vessels, later followed by small globules of fat from the areolar tissue which, gradually accumulating in number, sooner or later become a recognized mass. As this mass of fat globules increases in size, it then becomes organized with either cicatricial or semi-fibrous bands, often forming a glistening capsule and simulating a true hernial sac. The mass flattens out in a button-like or mushroom shaped head, causing resistance to the constant tugging of the flexible falciform ligament, and this, under the strain of the more violent intra-abdominal stress, causes the so-called epigastric tug, with more or less severe or intermittent pain referred to this region.

PATHOLOGY

The writer has endeavored in a few instances, when operating upon the stomach, or making an exploratory incision in the upper abdomen, to study more carefully the linea alba and observe whether either small transverse or round openings did not normally exist without the presence of a tumor. This condition, however, was never observed. Aside from the organized areolar pad, or button subcutaneous in position or displaced from the folds of the falciform ligament, the transverse fascia and linea alba, making a permanent tug on the falciform ligament. There is no special path-

* Read before Alameda County Medical Society, February 20, 1922.

ology of immediate danger to the patient except from the irritation and local congestion caused thereby. In case No. 4 of the operated cases, the writer felt so sure that he was dealing with a true hernia of omentum covered by a glistening fibrous capsule simulating peritoneum, that a free incision was made into the abdomen to the right of the median line. A probe was passed along side of the pedicle of the tumor through the opening in the transverse fascia and deflected to the right. The probe at no time entered the abdominal cavity, but remained within the folds of the falciform ligament. The tumor was then grasped with a forceps and the pull or tug on the falciform ligament could be plainly demonstrated. The impulse could be felt even to the anterior surface of the liver.

In case No. 3, which was operated under novocain before a class of students, the writer grasped the tumor with forceps and pulling upon it, asked the patient if that was the pain he complained of. The patient stated that it was and that the pain was very severe and went through to his stomach and back. The severe intra-abdominal pain from this experiment lasted several minutes. The size of the tumor varied in the writer's case from the size of a grain of wheat to an unshelled almond. The pedicle was always well organized and contained an unusually large blood supply for the size of the tumor. The pedicle was always adherent, and the tumors irreducible.

SYMPTOMS

Pain in the upper abdomen is invariably the first symptom. Case No. 3 was an alcoholic and the writer thought he was dealing with a case of gastritis. The areolar tumor was not observed on first examination. Patient was put on a milk diet, and receiving no relief after three days, he returned. At this time I definitely palpated and diagnosed a small areolar tumor in the epigastrium. In all cases (ten) the diagnosis was made by the writer. The patients did not know they had an epigastric tumor. The age of the patients varied from nineteen to fifty-five years. However, the development of this condition is marked by more or less positive signs. There is invariably pain at the site of the tumor, which is undoubtedly the seat of an active inflammatory process with more or less constant irritation. Each and every case had positive pain and tenderness at the site of the tumor. So constant has been this localized pain in all cases that in one of the operated cases the diagnosis was made on the symptoms and localized pain, although the tumor was not palpable. In another case, after demonstrating the presence of a tumor to my own satisfaction, I so flattened out the tumor by rough manipulation that I was later unable to demonstrate it to a colleague. At the operation which immediately followed, the tumor was found irreducible and flattened out to about the size and thickness of a dime. I would therefore suggest, at first palpation, very gentle manipulation with one finger.

The writer has never observed these tumors in children or women; they have all been in adult males. The tumors generally originate in the middle line, although, as previously stated, the

linea alba is a little wider in the upper abdomen and the tumor may be deflected to the right or left. Localized pain is the cardinal symptom, causing either acute or intermittent distress.

Differential diagnosis—In obese patients, especially if the tumor is small, the diagnosis may be difficult or quite impossible; the history with the onset of pain, the specific localization of a tender point in the upper linea alba, elicited by light pressure upon the abdominal wall, a pain that has no relation to stomach activity and often associated with exercise or intra-abdominal strain, will be a leading point. Tumors at or near the umbilicus are generally associated with umbilical hernia, a portion of which may be deflected upward by intervening transverse fibrous bands. Larger hernia in the epigastric region are not uncommon. True lipoma may be found in this region as well as any part of the body, or they may have originated in the falciform ligament, with the pedicle detached, and then become a simple unattached subcutaneous areolar tumor.

True epigastric hernia should have a peritoneal covering or sac. The writer has not observed this peritoneal covering in the series of cases referred to and does not consider them true epigastric hernia.

Villard, in *Lyon Chirurgical*, Nov. 1920, stated that epigastric hernia is merely a hernia of the falciform ligament of the liver through the linea alba.

It must not be overlooked, however, that while a patient may have a true epigastric tug, he may also have some other serious intra-abdominal lesion which should be carefully differentiated. It is stated in the literature that areolar tissue tumors in this region occur twenty times more frequently than epigastric hernia.

TREATMENT

This consists in removing the tumor or resistant mass and thereby relieving the tug on the falciform ligament. This relief may be accomplished under local or general anaesthesia. The areolar tumor should be teased apart in order to observe whether or not it contains a peritoneal sac, also to control the bleeding. The pedicle should be ligated. In one instance, the writer cut off the pedicle and was compelled to open the fascia in order to control the bleeding. The linea alba should be carefully examined because frequently more than one tumor exists. To prevent recurrence, the pedicle must be dislocated within and underneath the opening, and the fascia overlapped.

The writer has had five operative cases of this type and has also observed five other cases not operated on, but which from their clinical symptoms and localization, there was reason to believe they were similar in character. The operated cases have been completely relieved of their symptoms. The unoperative cases are still complaining of more or less intermittent distress, believing that their symptoms are due to more serious intra-abdominal troubles in the neighborhood of their gall-bladder or stomach.

A few days after discussing this paper with Dr. W. S. Porter, on August 2, he asked me to see a

case of what he considered an epigastric tug. The patient was an athletic young man, 24 years of age. He had a good history, also a good stomach and heart. The patient stated that while playing tennis the day before he felt a severe pain in his epigastrium. This pain was so severe as to cause him to stop playing. He thought possibly he had heart trouble.

Physical examination revealed only a small tumor in the linea alba. It was about one-third the distance between the umbilicus and ensiform cartilage. On palpation the patient complained of a tender point at the site of the tumor. When questioned at to whether this tender point was the only one, the patient said it was part of the pain, but that distress was deeper inside the abdomen, toward the back or under the arch of the ribs. The small epigastric tumor had not been observed before.

At operation a median incision through the skin was made over the linea alba underneath the subcutaneous fat. The small areolar tumor was demonstrated. The operator then opened the transversalis fascia, relieving the constricted tumor. A second tumor, or tug, was then discovered. This second tumor had not been diagnosed, it being quite small. The exposed areolar tissue preperitoneal, and the peritoneum of the falciform ligament were then exposed freely underlying the open wound. Dr. Porter, the operator, then grasped both tumors with separate forceps in order to ascertain how much pulling effect these tumors had on the falciform ligament, and was able to draw a considerable amount of the falciform ligament up into the wound, thus demonstrating clearly the pronounced tugging effect which they caused.

These tumors are assuming some industrial importance. The writer was consulted in a case before the California Accident Commission. The patient stated that while lifting a heavy tool-box, he received a sudden strain in his epigastrium and had considerable stomach distress. His family physician observed an epigastric tumor, and later operated for the same, making the report of a traumatic epigastric hernia. The doctor stated the hernia consisted of a small tumor of omentum, but had no peritoneal covering. So the tennis player, referred to in Dr. Porter's case, thought his trouble was due to strain. However, the operative findings of an organized pedicle of areolar tissue with a fibrous prolongation from the falciform ligament does not appear to be an acute affair. Its histological formation would seem to favor chronicity.

CONCLUSIONS

As in all other surgical procedures, a correct diagnosis is essential. A very small incision is recommended for removing these small tumors in order to avoid the appearance of an extensive operation, for the scar might confuse other diagnosticians, causing them to procrastinate should the patient later develop serious upper abdominal trouble.

The statement that the areolar tumor occurs twenty times more frequently than epigastric hernia, is only a conjecture of other operators, as no

statistics have been correlated as yet. The writer is of the opinion that small omental tumors are very rare in this region and quite foreign to this location, but that a small tug of peritoneum may occasionally be found. It is also hoped that others will not open the abdomen, as the writer did in one instance for an operation that can be performed by a more simple procedure.

On September 10, while associated with Chas. Coleman, who was about to perform a gastroenterostomy for carcinoma of the pylorus, at my request he made the incision in the upper linea alba. Preliminary to the incision, no epigastric tumor could be palpated. However, on exposing the transversalis fascia, a small areolar tumor was observed in the middle portion of the linea alba. This was the first case observed by me after operating many times in the median line for this purpose.

The opening in the fascia in this case was much larger than any previous case under observation, the opening being about the size of a slate pencil. The preperitoneal fat was not adherent in the opening, but a small pedicle of fat would bob up and down through the opening with each respiratory effort. This was not a true tug, as no effort at organization of the areolar pedicle had taken place. The patient had not complained of this condition, and it does not appear likely that he would until some organized resistance to the free action of the falciform ligament should occur. It simply goes to prove that this abnormality may occur even in the presence of malignancy.

DISCUSSIONS

Charles A. Dukes—I can readily see that the epigastric tug is going to assume some industrial importance. One of my associates recently sent a patient, age fifty-six, into the hospital for an epigastric hernia of traumatic origin. Upon examining this patient I found he had an epigastric button between the umbilicus and ensiform cartilage. It was very tender, and to this region the patient referred all his distress. However, the patient gave a history of having lost weight very rapidly during the past six months, with exhaustion. A suspicion of malignancy entered into my procedure following this case, so I deferred operation. The patient died six weeks later from general carcinomatosis. At autopsy I observed the typical falciform ligament tug which the reader of the paper has referred to this evening. Since making a closer study of the pathology of this organized tug, I am inclined to think it is a chronic affair and that some unusual strain aggravates the condition causing the patient to complain. I doubt very much if it should be considered an acute industrial accident.

Charles Coleman—At the request of Dr. Emerson, I have been looking for these small epigastric tumors in my upper abdominal cases during the past few months. I have also been making my incisions in the linea alba whenever possible. I had about given up the idea of finding this abnormality when I observed the case, which the reader has referred to this evening. In looking up this subject, Deaver mentions the fact that small openings may occasionally be found in the upper linea alba, and I think it is only when the fat of the falciform ligament becomes incarcerated in these openings that the patient complains. The epigastric tug, no doubt, causes the pain and distress, but I see no reason why it could not be considered an acute affair as well as a chronic condition. If it is an acute condition, why could it not arise from industrial trauma as well as any other type?

SUICIDE *

By JAMES T. FISHER, M. D., Los Angeles, Cal.

Were it not for the fact that the science of medicine is attended by phenomena unique and somewhat bizarre, the practice of the healing art would certainly lose its charm. This is essentially true in the study of the potential suicide. In consideration of this subject, we will not discuss the individual who kills himself because he or she happens to possess a definite mental disease. Such people, because of their prevailing psychosis, commit the overt act because they happen to suffer from a mental disease. In the typical melancholiac the suicide is merely a symptom of the disease. We feel that any depressed individual is a potential suicide. It is, however, quite interesting to attempt to note the causes determining suicide in an individual who is not insane. In our experience, looking over the case histories of our private patients, as well as those seen in public institutions, we find a very large number who are not afflicted with any definite mental disease so far as we are able to determine.

The popular idea entertained by the layman as well as by some physicians is that no one commits suicide who is not insane. We frankly admit that the deed is an insane act, but we know full well that many insane acts are committed by individuals not insane while under the burden of great misfortune or grief. Many such individuals came within the purview of the writer during the late war. Situations involving mental shock with their accompanying feeling tone of depression are common to many at times. How often do we hear the remark, often in a jesting way, that we "don't wish to live," and "death is really welcome," or that "I'll just go away and die"? To a large class of people possessing a psychopathic state of mind under great stress, when the terrors of living outweigh the terrors of death, the individual in a sudden state of emotion ends his life. The state of mind which allows its possessor to suicide is interesting. We have talked with many just before the act; we have talked with others who have been rescued, and in all instances there seemed to be an overwhelming emotion which compelled its possessor to the awful deed. There is a general law operative with man and beast for self-preservation. There is nothing on earth that can change this law except a morbid state of mind comparable, perhaps, to the emotion noted in great anger or grief, where in fact the mind is clouded and the judgment markedly impaired. We, all of us, at times do things utterly foreign to our usual composed state of mind, even to the commission of crimes. In consultation with different insurance companies the fact has been elicited that many have taken out policies with the intention of defrauding through suicide. The law that prevails at present is that one year must elapse before the payment shall be made to self-destroying policyholders. Missouri is unique in that it allows the insured to collect in case of suicide within a few

days after payment of premium, the legislature maintaining that suicide is simply an accident.

The good book says, "Thou shalt not kill." Strange as it may seem, not one word is mentioned in either the old or new Testament deprecating suicide. The Catholic and Jewish religions seem to be the only ones that emphasize this injunction. That suicide is contagious is conceded by all and it would be much better if the press would not print the usual headlines and bring the suggestion to many who might be regarded as pre-disposed. Both suicide, insanity and degeneracy are certainly increasing out of all proportion to the increase in population. Statistics obtained from England and many cities of the United States show this to be a fact. Some years ago our sister city, San Francisco, led the world with a ratio of 72.6 per one hundred thousand inhabitants. This we believe to be due to the excess of males in population and high per cent of foreign born, especially German and Chinese, in whom the suicidal tendency is very common. Next to San Francisco, Hoboken bears the unenviable reputation of 38 per one hundred thousand, which is practically twice as high as the general average.

Suicide is often associated with homicide. It seems to be a fact that the more complex our civilization the greater the opportunity for failure and disappointment, the greater will be the tendency to self-destruction. Everybody seems to be traveling the pace that kills, and the pursuit of pleasure and riches is the one aim which everyone is striving for. The fact that under stress and financial reverses there are not a few who think less of their own lives than they do for the comfort of those they leave behind. It is interesting to note that in London, where there is as much want and degradation as anywhere in the world, the suicide rate is no higher than in Philadelphia, a city noted for its homes and comparative comfort. We are, therefore, forced to believe that suffering and hardship are not the most potent factors in abating the love of life. We are sure that many individuals have inborn traits of character and mind that make the act of suicide easy to embrace when the pin pricks of social and business life appear. It is further interesting to note, looking back over thousands of suicides, that April and September take the greatest number, and that in women, ages of 30 to 45, and men from 50 to 70, are the period of greatest activity. Furthermore, it is firmly established that there is a transmission of the suicidal tendency. It is very apt to appear in the offspring and not at all unusual for it to appear at the same age as it appeared in the parent, and often the same means are sought to establish the end.

As illustrative of one or more types I may be permitted to cite the case of a prominent physician who became ill and lost his fortune. He found himself without means for obtaining the luxuries to which he and his family had been accustomed. He was under my care at the time, suffering from a mild degree of insomnia. He told me he had a policy for \$25,000, which would take care of his wife and little daughter when he was gone. He

* Read before the Neuropsychiatry section of the California State Medical Society, Yosemite Valley, May 17, 1922.

then put an end to his life, which, by a perfectly logical process, he deemed was not worth living.

There seems to exist a relationship between sexual perversions and suicide. Last spring I saw a brilliant young college woman, thirty-two years of age, who had traveled extensively and finally came to Los Angeles with her mother, intending to do secretarial work. She was somewhat of an emotional woman and always had a crush on some one of her own sex. She had two or three affairs, but always with some girl friend. She told me she became depressed, life was too stupid to endure, and that the only way out was death. She ended her life one night by taking cyanide of potash. As has been pointed out by Ring, sadism may lead to both homicidal and suicidal tendencies, as exemplified in the case of Harry Thaw. Masochism may also lead to suicide. A patient, thirty-six years of age, who had twenty-nine razor cuts on her arms and legs, took gas to free herself from her unhappy psycho-sexual dilemma. The suicide, then, must be regarded as suffering from a neurosis, or better, a psycho-neurosis, a defense reaction of a morbid state of mind, to which he finally succumbs. This in turn is occasioned in many instances that we know of by his inability to adapt himself to his unhappy situation. The whole question of mental good health is one of adaptation or adaptability. He cannot harmonize with his environment; he is inadequate in solving his domestic or financial problems. The conflict is too great. In the army he would develop a shell shock to enable him to get out of the trenches. In civil life it is a way out of trouble. He meets an obstacle—he can't remove it, so he goes around it. The intolerable situation is there and often times entirely imaginary, but it is up to the psychoanalyst to discover the cause, which is often not difficult to do if we appear on the scene in time.

We must admit, then, after noting the various causes which accompany the suicidal act, that the crux of the matter resides definitely in the temperament and mental make-up of the subject. The big lesson learned in the army was the enormous per cent of young men whom we designated a moron group. With these definite findings taken from the mass of young men throughout the entire country, how can we expect society at large to be in any great degree different? We have no desire to be understood that the masses of the people are degenerates; but is it not true that approximately 60 per cent of the people in any city belong to a class which can be designated as only partially responsible and possessing mental attributes which are defective? Not that all of them are feeble-minded or defective to such a degree that they could be recognized as such by any body other than an expert, but is it not true that these people somehow can scarcely earn their living? The analysis shows that they are inadequate individuals, hypersensitive, lacking initiative, often dreamers, and withal, devoid of poise and self-control. This class has but little religious training, and if any, aligned with some of the various cults, which are constantly developing and which grow for a while and then fall to pieces. This class

of people has no true philosophy of life and drifts along from year to year, without definite motive. This, I repeat, constitutes at least over one half of our everyday society as we meet or know it. A large proportion of this class possesses a family tree in which are many instances of mental disease. In our analysis of suicides, it is this class of people that constitute our case reports. Too many of these people live lives that are devoid of resources. Are we not like little children when some toy is broken; fall an easy prey to the big black cloud?

"Is life worth living?" is being asked by many these days. Scarcely can we pick up a paper but we note one or more who find in death their only relief. It is often contemplated a long time before consummated. Many have told me they knew it was cowardly, that they have prayed that some accident might befall them, as they knew it was a great sin to wilfully take their lives. Only in exceptional cases does the record of the suicide show him to be a sensible, well-poised individual, but rather a psychopath; hence my contention that suicides are people mentally lacking that belong to the above mentioned class of the mentally unstable. What poverty compares to the poverty of spirit? To have no reserve, nothing to fall back upon except the loose peg of chance. In contrast, how many we know in the midst of poverty and bereavement who cling to their patrimony of divinity and who go forward through life with dignity and joy to the realms of death!

ANNOUNCEMENT

The Seventh Annual Clinical Session of the American Congress on Internal Medicine will be held in the amphitheatres, wards and laboratories of the various institutions concerned with medical teaching, at Philadelphia, Pa., beginning Monday, April 2, 1923. Practitioners and laboratory workers interested in the progress of scientific, clinical and research medicine are invited to take advantage of the opportunities afforded by this session. Address inquiries to the Secretary-General.

SYDNEY R. MILLER, President,
Baltimore, Md.

Frank Smithies, Sec'y-General,
1002 N. Dearborn street,
Chicago, Ill.

The Trained Nurse—Channing Frothingham recently discussed the education of a trained nurse. He points out that young women should be trained to assist in the care of sick people under the direct supervision of physicians. "There might be a fundamental two-year course in nursing, at the completion of which some sort of title should be given to the individual."

Orville R. Chadwell in a letter to the Boston Medical and Surgical Journal suggested, "Call Frothingham's graduate a 'trained nurse.' We did so call her once. Let the name stand, and devise a new title for the highly specialized individuals of our present-day training schools. I feel confident that physicians and laity will be glad to welcome the re-incarnation of the 'trained nurse.'"

EDITORIALS

PASTEUR MEMORIAL MEETING

The San Francisco County Medical Society held a Pasteur Memorial meeting January 9, at which four excellent papers were read. As a result of delay in receipt of the manuscripts and a crowded Journal for February, it has been impossible to get them to the Journal readers at a more timely and appropriate date. With this explanation of the delay and in view of their character, these papers are being published in this issue of the Journal.

THE SECTION ON SURGICAL ANATOMY

Recently the officers of this section announced opportunities for surgical anatomical work in the laboratory of the University of California Medical School. The dean of Stanford University Medical School extends a similar opportunity to members of the section and of the State Society.

That these two great medical schools offer opportunities for review in anatomical work ought to be a source of congratulation to the State.

This also justifies the wisdom of dividing the work of the State Society into legitimate specialties and sections and expecting these sections, and particularly their officers, to render all-the-year-around service. The officers of all sections are considered officers of the State Society, and the contact during the past year between executive officers and the officers of these sections on various organizational and scientific matters shows an increasing interest, particularly in specialties of medicine not heretofore fully developed in medical organizations.

PROPOSED LEGISLATION

The Executive Secretary of the League for the Conservation of Public Health reports that many bills, affecting public health and the agencies of medicine, directly and indirectly, have been introduced in the present legislature. Some of those now in skeleton form will be completed, and other new ones may be expected during the latter half of the legislative session which opened March 5.

Several of the proposed laws are of considerable importance to the people and to the persons and agencies concerned with the promotion and protection of health. A few are wise, constructive measures calculated to advance the health and happiness of the people and, therefore, should have generous support. Most of the measures have little to commend them, and a few are vicious in their tendencies. Many of the bills will die in committee; others will be defeated, and others with or without amendments will become law.

We have neither the space nor the inclination to analyze all these bills, but we are discussing a few of the more important ones in this issue of the Journal. The amendments, progress and other features of these bills, good and bad, will be fol-

lowed by our League representatives during the rush of the last half of the legislative session and information will be furnished to the League membership from time to time.

The problem of the budget for the State Board of Health is discussed editorially in the February number of Better Health.

THE SEVENTY-FOURTH ANNUAL MEETING OF THE AMERICAN MEDICAL ASSOCIATION, SAN FRANCISCO, JUNE 25, 26, 27, 28 and 29

Preparations for this great convention are rapidly taking shape. Hundreds of members of the California Medical Association will be on one or more of the various committees, and each and every member is expected to assume his share of the responsibilities and duties of host to the visiting Fellows.

Every member of the California Medical Association is requested to arrange his time so as to be present at the convention in San Francisco from Friday, June 22 to Saturday, June 30.

The meetings will be opened with convention diagnostic clinics in the hospitals of San Francisco and Oakland that are accredited by the Council on Medical Education and Hospitals of the American Medical Association on Monday and Tuesday, June 25 and 26, from 10 a. m. to 1 p. m. These clinics are being planned so as to be interesting and instructive rather than social and spectacular. It is our hope that as many of our members as possible will attend these clinics and take part in the discussions.

Tuesday evening, the general session of the American Medical Association will be held at 8 o'clock. An interesting program of two hours is being prepared for this meeting. An important feature will be the induction to office of President-elect Ray Lyman Wilbur, and Dr. Wilbur's address. Dr. Wilbur is the first Californian to hold this distinguished office, and California physicians should show their appreciation of the honor by attending this meeting, to which all physicians and their friends are welcome.

Wednesday, Thursday and Friday will be devoted to the usual meetings of the various scientific sections, the house of delegates, and the various councils and committees. These will all be held in the Civic Auditorium. All the various halls are being carefully provided with all equipment necessary for the comfort of speakers and audiences. A complete directory showing the various halls will be issued later.

The various California committees responsible for the success of this convention are all busy and the results of their combined labors will be embodied in a special booklet which will be issued from California headquarters, on the Friday before the convention meets.

Monday and Tuesday, July 2 and 3, have been designated Post-Convention Diagnostic Clinic days for all parts of the state. Accredited hospitals in Los Angeles, San Diego and other parts of the state, as well as a number of county medical societies, where no accredited hospitals are avail-

able, are preparing to have clinics on these dates. It is a wonderful opportunity for county medical units to have one or two days of inspirational and valuable post-graduate work, and at the same time entertain two or more of our distinguished visiting Fellows.

At this writing, it looks as if these Convention and Post-Convention Diagnostic Clinics will be the big outstanding feature of the convention.

All members of the California Medical Association should make their hotel reservations now. If you wish us to do this for you or to render you any other service, write promptly to California Headquarters, 806-809 Balboa Building, San Francisco.

THE FIFTY-SECOND ANNUAL MEETING MEDICAL SOCIETY OF CALIFORNIA

The meeting of the State Society will be shorter than usual this year. This is no reason why it should be less important or less interesting. The fact that the meeting is followed immediately by the American Medical Association and several other national medical meetings ought to insure a good attendance at this State meeting. Certainly there will be more visiting Fellows from other states than usual.

The program of the State Society meeting will be published in full in the June number of the Journal. The outstanding features of the program are:

1. Meeting of the Council—Thursday evening, June 21, 8 o'clock.
2. General Session of the State Medical Society—Friday morning, June 22, 10 o'clock.
3. Section Meetings (each section to meet separately)—Friday afternoon, June 22, 2:30 o'clock.
4. Meeting of the House of Delegates and Meeting of the Council with Officers and County Societies and Section Officers—Friday evening, June 22, at dinner. This meeting to continue until all business of the House of Delegates has been transacted.
5. General Meeting (the League for the Conservation of Public Health)—Saturday morning, June 23, 10 o'clock.
6. Meeting of the House of Delegates—Saturday afternoon, June 23, 2:30 o'clock.
7. Meeting of the Council—Saturday evening, June 23, at dinner.

SECTION MEETINGS

A number of sections already have supplied their program complete to the central office; other sections are still at work making up their programs. Some of the sections are arranging to have each author read a five-minute abstract of his paper at their own meeting on Friday afternoon. Other sections are preparing to have two or three selected papers presented in full and other papers presented by title. Whatever the method employed by the various sections, it is important that the titles of all papers and the names of the authors and the sections before which they are to be read be submitted to the State Secretary's office at as early a date as possible.

THE DOCTOR OF MEDICINE PRACTICE ACT

Senate Bill No. 330, now before the legislature, is one of the most important attempts at constructive legislation upon health matters that has been placed before any legislature. Heretofore laws governing the licensure and practice of the healing art in this and in other states have been drawn to meet the requirements of this or that "faction," "school," or political entity and, therefore, usually have been unsatisfactory. These laws usually attempt to include too much. It would be as feasible to make one set of transportation rules to fit all forms of transportation from walking to flying as to try to make one law fit all the varieties of educational qualifications, ethics, modes of procedure and claims of the large variety of groups licensed to practice the healing art. The Medical Practice Act of California has been, and is, one of these compromise laws. This statement does not constitute a criticism of the personnel of the board. Under it have been licensed a large variety of "doctors." In education these vary from practically none to those of the highest academic attainments. In methods of practice and claims they include every class from the university-educated, experienced, ethical physician employing all knowledge of proven values in the diagnosis and treatment of disease to the various types of drugless healers with a bewildering assortment of "remedies" for any and all classes of physical and mental ills.

Attempts have been made in the present Medical Practice Act to insure at least some education for all practitioners by prescribing education measured by "hours" in certain specified subjects. The kind of a school authorized to give these hours and the preparation the student must have before he begins his specified "hours" of "higher education" is not effectively provided for in the law. Educational requirements based upon "hours," or upon anything else that has been incorporated into law, does not harmonize with the other laws of the State governing institutions of "higher education."

As the laws of California now stand, any five persons may incorporate a university or college upon a payment of about twenty dollars and complying with a few other perfunctory rules. Any of these "colleges" can award all degrees that our great universities can award or any other "degrees" they choose to invent. As these "colleges"—and they are numerous—are incorporated under our State laws, who is going to discredit their beautiful diplomas? The most numerous of these schools are those purporting to teach the healing art.

By initiative legislation two groups of special schools and special methods of practicing the healing art won the political right at the last election to license and regulate their own people and their own "colleges." Under these initiatives, which cannot be amended or interfered with by the legislature, the osteopaths and chiropractors still enjoy all privileges of the old Medical Practice Act or any amendments the legislature may make to it and they also have the special rights granted by their initiatives.

The educated physicians of the State feel that at least they should not be penalized for being university men and should have a license law applicable to themselves only; this without disturbing in any way any of the other laws now in force. Senate Bill No. 330 is offered for this purpose. This law has been drafted by the League for the Conservation of Public Health after two years of work including correspondence and conferences with members of the State Medical Society and the League. The principle of the bill has also been endorsed by a committee representing the faculties of the medical schools of Stanford University, University of California, College of Medical Evangelists, Medical Examining Board and the Secretary of the State Medical Society. The complete bill is as follows:

SENATE BILL NO. 330

Introduced by Senator Hurlley, January 30, 1923. Referred to Committee on Public Health and Quarantine.

An act to provide for the examination and licensure of doctors of medicine (M.D.'s) for the practice of medicine and any and all of its specialties, including the prevention and treatment of any and all kinds of infirmities, injuries and mental and physical diseases and conditions of human beings and for the regulation of the practice thereof; to establish a doctor of medicine (M.D.) bureau of licensure and provide for the appointment of the members thereof, and prescribe their powers and duties.

The people of the State of California do enact as follows:

Section 1. A self-sustaining bureau of licensure, examination and regulation of the practice of medicine by persons who hold the degree of doctor of medicine (M.D.) from accredited institutions of learning and to be known as "The doctor of medicine (M.D.) bureau of licensure of the State of California," termed herein the bureau, to consist of five members, is hereby created and established. The governor shall appoint the members of said bureau from a list of persons eligible under the terms of this act within thirty days after the filing of such a list as herein provided. The deans of Leland Stanford Junior University school of medicine, University of California medical school and the College of Medical Evangelists and the chairman of the council of the medical society of the State of California shall file such list with the governor and at his office within thirty days after passage of this act. Such deans and said chairman shall thereafter and in the month of December of each year, file a list of such persons eligible for appointment with the governor and at his office and the governor shall fill all vacancies occurring on said bureau during the ensuing year from such list.

No person shall be appointed to such bureau who is not a citizen of this state holding the degree of doctor of medicine (M.D.) from an institution of learning, the requirements of which at the time of conferring such degree were in no particular less than those prescribed by the Association of American Medical colleges or the council on medical education and hospitals of the American Medical Association.

The term of office of each member shall be five years; provided, that of the first bureau appointed two members shall be appointed for one year, two for three years and one for five years and that thereafter all appointments shall be for five years, except that appointments to fill vacancies shall be for the unexpired term only. Each member of the bureau before entering upon the duties of his office shall take the constitutional oath of office.

The governor may remove any member of the bureau for continued neglect of duty or for dishonorable or unprofessional conduct, which shall be deemed to consist of any of the acts hereinafter set forth as grounds for revocation of certificate, as set forth in section four hereof, upon the written certification of such conduct by a majority of said deans and chairman.

Sec. 2. 1. The bureau shall be organized on or before August 1, 1923, by electing from its number a president, a vice-president and a secretary who shall also be the treasurer, who shall hold their respective offices during the pleasure of the bureau. The secretary-treasurer shall make and file with the bureau an official bond, with corporate surety approved by two other members of the bureau, in the penal sum of ten thousand dollars conditioned for the faithful discharge of his duties according to law.

2. The office of the bureau shall be in the city of Sacramento. Sub-offices may be established as required in Los Angeles and San Francisco and such records as may be necessary may be transferred temporarily to such sub-offices.

3. Legal proceedings against the bureau may be instituted in the county of Sacramento, the county of Los Angeles and the city and county of San Francisco.

4. It shall require the affirmative vote of three mem-

bers of the bureau, except as herein otherwise expressly provided, to elect its officers, to carry any resolution, to adopt any rules, pass any measure or to authorize the issuance or the revocation of any certificate.

5. The bureau shall keep an official record of its procedures, a part of which record shall consist of a register of all applicants for certificates under this act, all certificates issued and to whom, and of all certificates revoked, together with any action of the bureau in reference to any of said matters and through its secretary shall make an annual report to the governor showing its receipts and disbursements, general financial status and such other facts as are necessary for a complete understanding of the operation of the bureau.

6. The bureau shall file in the month of January of each year in the office of the county clerk of every county in this state a list of persons then holding valid and unrevoked doctor of medicine (M.D.) certificates theretofore issued by the bureau and a list of all persons whose certificates have been revoked, during the preceding year.

7. The bureau shall compile and publish annually a complete directory giving the names and addresses, educational attainments and specialties, if any, practiced by each doctor of medicine (M.D.) licensed by the bureau.

8. All fees collected by or on behalf of the bureau and all its receipts of every kind and nature shall be reported by the bureau at the beginning of each month for the month preceding to the state controller and at the same time the entire amount shall be paid into the state treasury and shall be credited to a fund to be known as the doctor of medicine (M.D.) bureau of licensure contingent fund, which fund is hereby created. Such contingent fund shall be for the use of the doctor of medicine (M.D.) bureau of licensure and out of it but not otherwise shall be paid all expenses of the bureau.

9. The bureau shall have power:

(a) To adopt a seal which shall have inscribed upon it the following: "The Doctor of Medicine (M.D.) Bureau of Licensure, State of California," with such appropriate design as the bureau may select.

(b) To adopt from time to time such rules and regulations as the bureau may deem necessary for the performance of its work.

(c) To issue and revoke doctor of medicine (M.D.) certificates and to examine applicants therefor as herein provided.

(d) To summon witnesses and to take testimony in any matters pertaining to its duties and each member shall have power to administer oaths and take affidavits.

(e) To pay the actual expenses of the members of the bureau in connection with official business.

(f) To fix and authorize a salary to its secretary in such sum per month as the remaining members of the bureau shall from time to time fix and determine, and the governor approve, and to employ and compensate such clerks and other assistants as are necessary to carry out the provisions of this act, provided the fees and other receipts of the bureau are sufficient to meet the expense and provided the same is approved by the governor.

(g) To require licentiates of the bureau to furnish such information as is necessary to enable it to compile adequate records and to prepare the directory herein elsewhere provided for, upon blanks furnished by the bureau.

(h) To charge and collect a fee of fifty dollars from every applicant for a license hereunder, except as herein otherwise provided.

(i) To do any and all things necessary or incidental to the exercise of the powers and duties herein granted or imposed.

Sec. 3. 1. The doctor of medicine (M.D.) bureau of licensure shall issue one form of certificate only which certificate shall be known as the "doctor of medicine (M.D.) certificate." Said certificate shall entitle the holder to practice medicine and any and all of its specialties including the prevention and treatment of any and all kinds of infirmities, injuries and mental and physical diseases and conditions of human beings, as a doctor of medicine. The doctor of medicine (M.D.) bureau of licensure shall issue such certificate after examination in its discretion as herein provided and only to persons holding the degree of doctor of medicine from an institution of learning the requirements of which at the time of conferring such degree were in no particular less than those prescribed by the association of American medical colleges or the council on medical education and hospitals of the American Medical Association provided such person furnishes the bureau satisfactory evidence of good moral character and good ethical and professional standing, and meets the further requirements for licensure as herein provided; and,

2. The bureau in its discretion may issue such doctor of medicine (M.D.) certificate without examination to any applicant who is the holder of such doctor of medicine (M.D.) degree as herein described and who possesses such qualifications for doctor of medicine (M.D.) certificate as are herein provided for.

3. Every applicant for such doctor of medicine (M.D.) certificate, except as hereinafter expressly provided, shall pay to the secretary of the bureau a fee of fifty dollars.

4. All applications for such doctor of medicine (M.D.) certificate shall be in writing and signed and verified by the applicant and filed with the bureau thirty days before any action is taken by it thereon, and upon a form to be furnished therefor by the bureau, which form

shall among other things require the full name of the applicant, his residence, age which must not be less than twenty-one years, education, training, his diploma conferring upon him the degree of doctor of medicine (M. D.), hospital experience which shall not be less than one year in a hospital, the service of which, at the time of such experience, was in no particular less than that prescribed by the council on medical education and hospitals of the American Medical Association, or one year's experience or scientific study deemed by the bureau equal to such period of hospital experience, and information on previous professional and business affiliations and such other data regarding his moral character and ethical and professional standing and attainments as the bureau shall prescribe. If such verified application discloses on its face that the applicant is not qualified to receive the certificate herein provided for, the bureau may refuse to consider such application or to examine such person further.

5. The bureau shall hold examinations on the third Tuesday of January and the third Tuesday of June in each year at such places as it may designate and at such other times and places as it may from time to time determine.

6. All examinations conducted by the bureau shall be practical in character designed to ascertain the applicant's fitness for practicing medicine as a doctor of medicine, shall be in the English language and shall be wholly or in part in writing, at the discretion of the bureau and shall include the subjects embraced within the curriculum of these institutions of learning conferring the degree of doctor of medicine (M. D.) the requirements of which at the time of such examinations are in no particular less than those prescribed by the association of American medical colleges or the council on medical education and hospitals of the American Medical Association. Provided, further, that the bureau shall issue said doctor of medicine (M. D.) certificate without examination to any person who is now and has been for more than five years prior to the passage of this act a citizen of this state and legally licensed to practice and practicing medicine or any of its recognized specialties continuously for said period in this state and who holds the degree of doctor of medicine, and applies to this bureau within six months after the passage of this act for such doctor of medicine certificate, and shows to the satisfaction of this bureau that he possesses good moral character and good ethical and professional standing, and upon payment of a fee of ten dollars.

Sec. 4. 1. The bureau shall have power to revoke any doctor of medicine (M. D.) certificate theretofore granted by it to any person who after the hearing herein provided for shall be found by the bureau to have been guilty of any of the following:

(a) The employment of fraud or deception by the applicant in applying for or securing the certificate or in passing the examination provided for by this act.

(b) Conviction of a felony or a crime involving moral turpitude.

(c) The procuring, agreeing to procure, aiding or abetting in procuring or attempting to procure a criminal abortion.

(d) Wilfully betraying a professional secret.

(e) Habitual intemperance in the use of narcotics, other than habit-forming drugs, alcoholic liquors or stimulants.

(f) The practice of medicine under a false or assumed name or the impersonation of another licensee under this act.

(g) Causing the publication, circulation, exhibiting or displaying publicly of any advertisement, or giving notice or information, or prescribing or using any medicine or means purporting to regulate the monthly periods of women or purporting to re-establish suppressed menses or purporting to control or prevent the birth of children, or relative to the treatment, alleviation, palliation, cure or prevention of any disease, weakness or condition of the sexual organs, such as prejudicially to affect morals and public health.

(h) Soliciting, demanding or accepting discounts, commissions, rebates in money or anything of value from any person, firm or corporation operating or conducting drug stores, or optical stores, or druggists, opticians, technicians or other persons licensed to practice the healing art, as a consideration for referring patients to such person, firm or corporation to secure drugs, prescriptions, goods or merchandise or services.

(i) Publicly advertising or holding himself out to the public by any means, as having special ability to treat or cure chronic or incurable diseases by secret or unscientific methods.

(j) Employing solicitors, cappers, runners, drummers or agents or subsidizing or paying discounts, commissions, rebates in money or anything of value to any hotels, boarding houses, laboratories or drug stores, firms or corporations, technicians or other persons licensed to practice the healing art to procure patients.

(k) Continuous gross negligence and malpractice in the care and treatment of patients.

(l) The violation of any provision of this act.

2. The bureau or any citizen of this state may file with the secretary of the bureau a sworn complaint charging any licensee under this bureau with the commission of any one of the foregoing acts and petition that the license theretofore granted to such person be revoked. Upon the filing of such verified complaint with the secretary, the secretary shall serve a copy thereof upon the person so accused, together with a notice fix-

ing a time and place of hearing, which time and place shall be fixed by the bureau and shall not be less than thirty days nor more than ninety days from the date of service of such notice when and where said bureau will conduct a hearing thereon and that such person may be present in person and by attorney if he so desires and may offer evidence and be heard in his defense. At the time and place so fixed for hearing before the bureau, as hereinabove specified, or at any time or place to which the matter may be continued and with the consent of all parties interested said hearing may be continued for more than ninety days; the bureau shall receive evidence in support of such complaint and from the person accused in reply thereto and shall accord the person against whom charges are preferred a full and fair opportunity to be heard in his defense. The person making such complaint, the person accused or the bureau or any member thereof may compel the attendance of witnesses at such hearing or hearings by subpoena issued by the secretary of the bureau under its seal. Depositions of witnesses may be taken in such matters in the same manner as in civil cases and all the statutes in force as to taking of such depositions and the issuance and service of subpoenas shall be applicable.

3. The action of the doctor of medicine (M. D.) bureau of licensure in refusing to grant or in revoking any doctor of medicine (M. D.) certificate may be reviewed by the supreme court of this state or by the district court of appeal for the district in which such applicant or licensee resides and not otherwise. In all such review proceedings the bureau shall be represented by the attorney-general of this state.

Sec. 5. The bureau may, in its discretion, enter into and establish reciprocal relations with bureaus, boards, committees or departments representing other states which bureaus, boards, committees or departments are authorized and empowered to issue doctor of medicine (M. D.) certificates based upon the applicants holding the degree of doctor of medicine (M. D.) from an institution of learning whose requirements at the time of conferring such degree were in no particular less than those prescribed by the association of American medical colleges or the council on medical education and hospitals of the American Medical Association.

Sec. 6. 1. Any person who is not the rightful holder of a valid and unrevoked doctor of medicine (M. D.) certificate issued by the bureau, who holds himself out or advertises or represents himself in any manner to the public, or to any sick person to be the holder of such certificate, or who displays in his office or otherwise a false or forged doctor of medicine (M. D.) certificate or such certificate illegally obtained, or who impersonates, or in any manner represents himself to the public or any sick person to be any doctor of medicine (M. D.) to whom a certificate has been granted by the bureau, shall be guilty of a misdemeanor and upon conviction thereof shall be punished by a fine of not less than one thousand dollars nor more than ten thousand dollars, or by imprisonment for not less than six months nor more than five years, or by both such fine and imprisonment.

Sec. 7. It shall be the duty of the several district attorneys of this state to prosecute all persons charged with the violation of any of the provisions of this act. It shall be the duty of the secretary of the bureau under the direction of the bureau, to make investigations and gather information for the efficient enforcement of this act.

Sec. 8. This act shall be known and cited as the "doctor of medicine (M. D.) bureau of licensure act."

PROTECTING THE TITLE "DOCTOR"

Senate Bill No. 331 now before the legislature reads as follows:

An act to protect the public from misrepresentation, imposition and fraud of advertising "doctors" by regulating the use of printing, publishing or any form of advertising of the words, and letters and abbreviations and titles of "doctor," "Dr.," "physician," "physician and surgeon," "surgeon," "M. D.," "D. C.," "D. O.," "N. D.," "Opt. D.," "D. S. C.," "Ph. C.," "Ph. D.," or any like title, abbreviation or appellation indicating that the user holds himself out as possessing knowledge, skill or power to treat any physical or mental ailment of human beings, imposing penalties for the violation thereof, and repealing all acts and parts of acts in conflict herewith.

The people of the State of California do enact as follows:

Section 1. It shall be unlawful for any person who holds himself out as competent to treat the sick or afflicted in this state or as having knowledge, skill or power to treat, relieve or cure any physical or mental ailment of human beings to use the words, letters, abbreviations, appellations or titles "doctor," "Dr.," "physician," "physician and surgeon," "surgeon," "M. D.," "D. C.," "D. O.," "N. D.," "Opt. D.," "D. S. C.," "Ph. C.," "Ph. D.," or any like words, letters, titles, abbreviations or appellations on office doors, institutes, sanitariums, residences, windows, billboards, electric signs, banners, theatre curtains, movie screens, posters, placards, decalcomanias, engravings, pictures, paintings, circulars, letters, cards, handbills, or in newspaper, periodical or any other medium of advertising without accompanying the title "doctor," "Dr.," "physician and surgeon," "physi-

cian," or "surgeon," with words or letters showing the educational qualifications, attainments of such person and the degree upon which it is based. Such letters or titles are, namely, M. D., D. O., D. C., Ph. D., Ph. C., and like letters or titles, which shall be accompanied also by the name of the school, college or university that conferred the degree, or the approved abbreviation of the name of the school, college or university that conferred the degree and followed by the name of the state licensing or examining board that issued the license held by such person to practice in California.

Sec. 2. Nothing in this act shall be construed to authorize foreign or itinerant "doctors" or any person not licensed by the laws of this state to advertise to treat the sick by mail or otherwise.

Sec. 3. Any person who violates any of the provisions of this act shall be guilty of a misdemeanor and upon conviction thereof shall be punished by a fine of not less than fifty and not more than two hundred dollars or by imprisonment in the county jail for not less than thirty days nor more than ninety days or by both such fine and imprisonment.

Sec. 4. It shall be the duty of the several district attorneys of this state to prosecute all persons violating any of the provisions of this act.

Sec. 5. All acts and parts of acts in conflict with this act are hereby repealed.

Sec. 6. This act shall be known and cited as the "act to protect the public from misrepresentation, imposition and fraud of advertising doctors."

The San Francisco Examiner discusses this proposed law editorially under the title of "Guarding a Title" as follows:

"The title 'doctor,' has come to have a definite meaning, when used by men and women engaged in the profession of healing. It has usually had the connotation of M. D., 'doctor of medicine.'

"Its value arises out of the work its possessor had to perform in order to earn it.

"When the title begins to be used promiscuously by men and women whose educational qualifications are known to be inconsiderable, and are *not* doctors of medicine, it becomes cheapened.

"To guard against cheapening an appellation for which the doctor of medicine has had to undergo an enormous amount of work and training, a bill has been introduced at Sacramento by Senator Hurley laying down regulations under which it may be used.

"The bill provides that when the 'Dr.' title is used, in printed matter, the name must be followed by the initials indicating the authority for the title, as M. D., D. O., D. C., and the name of institution by which the title was conferred.

"The bill seems a sensible and honest proposal. It will hurt no one except those trying to parade under false pretenses. And these should be hurt.

"The legislature should pass it."

THE PROPOSED RADIOGRAPHERS' LAW

Assembly Bill No. 478 before the legislature is designated:

An act to promote the better education of practitioners of radiography; to provide for the issuance of certificates of registration as registered radiographers to qualified applicants by the state board of health; and to provide penalties for the violation hereof.

Excluding certain routine features of organization and administration, the principal features of the bill are:

Section 1. For the purposes of this act radiography is defined to be a group of diagnostic and physical procedures to be prescribed by legally licensed doctors of dentistry and those legally licensed under the laws of the State of California to diagnose and treat the sick or afflicted (legally licensed doctors of dentistry and those legally licensed under the laws of the State of California to diagnose and treat the sick and afflicted are hereinafter in this act referred to as doctors; and where the term doctor is used, it means legally licensed doctors of dentistry, and those legally licensed under the laws of the State of California to diagnose and treat the sick and afflicted), and carried out according

to such doctors' direction by persons registered under this act.

The diagnostic and physical agencies and activities included for purposes of this act under the general term of radiography are:

Radiography of the human anatomy by means of the Roentgen ray or other photographic processes as an aid for diagnosis of the diseases or deformities of the human body;

Localizing foreign substances in the human body by means of the Roentgen ray.

Interpretation of the findings of the photographic plates, films or other impressions, said interpretation to be made only to a doctor;

Radioscopy, or the examination of the deep structures of the human body by means of the fluoroscope, this work to be done only upon the written prescription of and under the supervision of a doctor.

Sec. 2. No person shall be entitled to practice radiography in the State of California, except a doctor, unless a certificate shall have been issued to him as provided in this act.

Nothing herein contained, however, shall prevent a doctor or person licensed under this act from employing assistants who shall work under the supervision of such doctor or licensee under this act.

Sec. 3. Within thirty days after the passage of this act the state board of health shall establish and maintain a department of examination and certification of registered radiographers as hereinafter provided. Said examination shall be conducted twice a year by a committee of three examiners, one of whom must be registered under this act, appointed by the state board of health, under such rules and regulations as may be prescribed by said board. Each applicant shall be a citizen over the age of twenty-one years, and shall pay a fee of fifty dollars (\$50), which will in no case be returned to the applicant. Due notice of examination shall be given in such manner as shall be prescribed by the board of health. The examination shall be practical in character, and designed to ascertain the applicant's fitness to practice radiography, and shall be based upon the equivalent of the following preparation by the applicant: the completion of a four year high school course, besides

Anatomy, osteology, physiology.....	500 hours
X-ray physics and X-ray chemistry.....	300 hours
Technique (including topographical anatomy and plate reading).....	500 hours
Ethics and principles and practice of radiography	200 hours
	1,500 hours

The application for permission to take the examination shall be supported by affidavits or other evidence showing that the applicant has completed the prescribed work.

Sec. 4. The board shall issue to each applicant successfully passing this examination a certificate showing the applicant's qualification to practice radiography under the provisions of this act.

Sec. 5. It is further provided that any person over twenty-one years of age, who is a resident and citizen of the State of California at the time of the passage of this act, and engaged in the practice of radiography as a business or for hire, must be granted a certificate as a registered radiographer without taking an examination; provided, such application shall be made within six months of the passage of this act, and that such application be accompanied by credentials of character, together with the affidavits of two doctors showing continuous training and experience of more than one year prior to the passage of this act, together with a license fee of fifty dollars.

Sec. 6. All persons who have been duly licensed in accordance with the provisions of this act shall be known and styled as registered radiographers, and may use the words "registered radiographers" after their names.

A law of this same general character was passed by the last legislature, but the League for the Conservation of Public Health presented convincing reasons to the Governor and the bill was vetoed.

Everyone will agree that some sort of regulation should govern the use of the Roentgen ray. It is one of the essentials in diagnosis and treatment of diseases. But it is exceedingly dangerous and growing more so with development in the manufacture of the machines, some of which now use 300,000 volts of electricity. The proposed law does not insure the public the protection it should have.

The "blanket" provision of the act is a very inclusive one, requiring "registration" without examination of all persons now using X-rays in the State. No one apparently knows how many per-

sons there are of this class in the State, but judged by the sales of X-ray machines, number of advertisements and other available data, they can surely be counted by thousands.

Under the act, any person licensed to practice the healing art by any method can prescribe the use that is to be made of X-rays. A licensed drugless healer who has the most limited education can himself administer or prescribe any and all the dangerous X-ray procedures employed in the diagnosis and treatment of disease. It may be said with truth that this may be done now, due to the absence of any law. However, it is quite another matter to put the approval of the state upon some of these situations.

The act also provides for the licensing as "Registered Radiographers" of a group of technicians who can do X-ray work only under direction of some person licensed to practice the healing art. These technicians should be regulated, but the educational and other licensure requirements of both those who are authorized to prescribe X-rays and those who are to carry out the prescription should be much higher than is proposed in Assembly Bill No. 478.

PROPOSED AMENDMENT TO WORKMEN'S COMPENSATION AND INSURANCE ACT

Senate Bill No. 294 now before the legislature is:

An act to amend section sixteen of the "workmen's compensation, insurance and safety act of 1917," approved May 23, 1917, to provide for the creation of two medical referee boards to pass upon the cause and extent of disability and the adequacy of treatment of injured employees and the cause of death in death cases arising under said act.

This law obviously must be radically amended to make it acceptable to the medical profession or those whom they serve.

We urge every member of the State Medical Society to carefully study this bill and send us any constructive suggestions for proper amendment thereof.

DEPARTMENT OF PROFESSIONAL STANDARDS AGAIN

Assembly Bill No. 442 now before the legislature is very similar to the bill for the same purpose that was defeated upon information furnished by the League for the Conservation of Public Health at the last legislature.

Briefly, the law proposes to remove the control of licensure, discipline and revocation of license of the members of various "professions" from boards composed of members of these "professions" and to place the duties and responsibilities of all of these boards in the hands of a person not practicing any of these professions and who, therefore, probably will not be overly well versed in the requirements of the situation. The standard of honesty, integrity and efficiency of the new director of standards, or of the present boards, is determined by the judgment, largely, of the Governor, who makes the appointments in either case and can terminate the services of any of them for cause.

The costs of operating most if not all of these boards is borne by a special tax for the purpose

levied upon licentiates. For physicians, this special tax is two dollars a year. It may be confidently predicted that this tax will cause even more strenuous protest under the proposed law than exists under present conditions.

Control over licensure and discipline of the men who, among other things, control the prescribing and dispensing of alcohol and habit-forming drugs is a most important responsibility. The man who has this responsibility and also that of controlling the licensure of professions dealing with health is going to have many problems and temptations, and he ought to be one to command much more than the salary of \$4000 allowed in the proposed law.

If this law is placed upon the statute books of California, it will invite the same sort of scandal, political graft and inefficiency that followed the development of the laws upon which it is modeled elsewhere.

The main features of the law are shown in the following abstracts:

365. A department of the government of the State of California to be known as the department of professional standards is hereby created. The department shall be conducted under the control of an executive officer to be known as director of professional standards, which office is hereby created.

365b. The director shall have power to issue licenses to practice for all professions included in this article for which licenses are required by law and to suspend or revoke licenses heretofore or hereafter issued for cause as prescribed by law. He shall not be a practitioner of any of the professions under his jurisdiction.

365c. The director of the department of professional standards, except as in this article otherwise provided, shall succeed to and is hereby invested with all the duties, powers, purposes, responsibilities and jurisdiction of the state board of accountancy, state board of architecture, board of dental examiners of California, state board of embalmers of the State of California, state board of library examiners, board of medical examiners of the State of California, state board of optometry, state board of pharmacy, state board of examiners in veterinary medicine, and of the several officers, deputies and employees of such bodies and offices.

365d. The director of the department of professional standards is hereby invested with the power and is charged with the duty of administering and enforcing all laws now or hereafter imposing any duty, power, or function upon any of the bodies, offices, officers, deputies or employees herein transferred to said department.

CHIROPRACTIC BOARD APPOINTED

After "refereeing the fierce battle waged by fifty-four applicants" for positions on the Chiropractic Board for thirty days, the Governor has appointed James P. Compton, Oakland, for a three-year term; J. B. Edgerton, Banning, for three years; Ray S. Labarre, San Francisco, for two years; W. A. Messick, Los Angeles, for two years, and Albin Peterson, Los Angeles, for one year.

In naming the board, Governor Richardson issued the following statement:

"The appointment of the Chiropractic Board is the most difficult job I have undertaken since assuming office. Preparing the budget and listening to the outcry of those who will be painlessly removed from the payroll has had its incidents of amusements, but chiropractic is a serious proposition.

"The initiative law adopted in November provided that the Governor should appoint a chiropractic board of five members, no two from any one school of chiropractic, and not more than two from any county.

"My predecessor, after six weeks' study of the

question, passed it along to me. I have spent thirty days trying to referee the fierce battle which has been waged by fifty-four applicants, their friends, and various chiropractic schools and numerous societies.

"If the files of letters I have received showing the opinion of chiropractors of each other should be published, the legal fraternity would have a busy time with libel suits.

"The fight between the chiropractic schools has been intense, and as there are only five appointments to be made and at least a dozen leading schools exist, all could not be satisfied.

"The law provides that all chiropractors in the State must be examined by the new board except the board members themselves. There is great fear on the part of some chiropractors that the board might be too rigid and refuse licenses to many now practicing.

"It has been my purpose to appoint a board that will deal fairly and justly and still maintain a reasonably high standard of educational requirement. The law says the Governor may remove a member from the board after sufficient proof of inability or misconduct.

"I feel that the board I have appointed will be satisfactory to the chiropractors as soon as it is in operation. I have been guided in my conclusion by the wishes of the majority of chiropractors of the State. Those I have appointed are recommended by the majority of the men who conducted the campaign for the chiropractic bill and by the oldest and leading chiropractic societies."—(S. F. Examiner, Feb. 11, 1923.)

"PATENT MEDICINE" SECRECY—A TARDY ADMISSION

For years the medical profession has insisted that the real reason that nostrum makers keep the composition of their products secret is (1) for the glamor that such secrecy throws around them and (2) the fact that so long as the public does not know what is in a preparation the advertiser's imagination is given freer play. The unknown is always awe-inspiring. The "patent medicine" makers, on the other hand, have stoutly maintained that their reason for keeping the composition of their product secret is that the formula is personal property and, if it were made known, the market would be flooded with imitations, and their property destroyed. Now comes the mouthpiece of the "patent medicine" people, Standard Remedies, with the tardy admission that the medical profession is right and their own constituents wrong. Says this publication in an editorial, "Formulae and Secrecy":

"It should be remembered that while a developed formula has a great value, it is the trade name, the advertising, the merchandising skill applied in connection with it that creates its valuable good will. Ten to one a thorough search through books of formulae will reveal that your own is already known to the medical world. But no one can get the same benefit from it that you have gained unless they spend in merchandising it the same money you have spent."

Elsewhere in the same editorial Standard Remedies admits that "the ingredients of some of the biggest selling proprietary medicines are duplicated in one way or another by imitators. Usually without profit." In other words, as the Journal has iterated and reiterated, the composition of the average "patent medicine" is usually the least commercially

valuable thing about it. The real thing of commercial value is the name, which the manufacturer protects by a perpetual monopoly granted under the trade-mark law. Pink dish-water could be put on the market under some fancy name (trade-marked) and by persistent and insistent advertising built up into a large property. If it were nothing but pink dish-water, only advertising, of course, could keep it alive. Add a stiff dash of spiritus frumenti, or some equally intriguing drug, to the mixture and the composition alone might keep it moving after momentum had been given it by advertising. The claim long made by "patent medicine" makers that they had to keep the composition of their nostrums secret in order to protect themselves is buncombe because every "patent medicine" maker knows what Standard Remedies admits, that his preparation can be analyzed by any good chemist and duplicated. Now that the "patent medicine" people themselves acknowledge that the real commercial value of their products lies in the "development" that has been brought about by advertising, there is no longer any reason for our timid lawgivers shying at every "open formula" bill that may be introduced for the purpose of giving the drug-taking public a modicum, at least, of protection.—J. A. M. A.

The True Physician.—The following tribute to the doctor, which appeared in the Boston Transcript and was republished in the A. M. A. Bulletin, fits well the true physician who, through scientific study and work, and by adherence to the truest ideals of his profession, develops himself to the limit of his capacity for helpful service to humanity and then delivers that service to those who need it in the most effective manner possible.

"The doctor is altogether a special kind of person. His illusions are few; his inside information is enormous, and if, now and then, he wears a superior smile, forgive him; he has probably just heard some remark which he knows to be fatuous or hypocritical. Again, his jokes are likely to be a bit technical and his views of life materialistic, but if he has a brand of idealism you can put your trust in it, for he has learned it in a hard school, and it is genuine.

"The lawyer we take into our confidence when we get good and ready; the clergyman we admit to our parlor and dining room; but the doctor goes into the bedroom unannounced. He goes in at a time when the house, temporal and spiritual, has not been set to rights for his reception, and if what he sees there surprises him he seldom lets it be known. In the healing of bodies he has opportunities for healing souls which never come to a priest, and with which many a priest could not deal. He is the lay father-confessor, regardless of creed. In cities, his clubabilities are famous, he always fits; and clubs are just full of him. He is a safe man on committees; he can turn his hand to any public business and, if let alone, discharge it creditably. He knows more psychology in five minutes than the philosopher does in a week, and he is withal the least emotional of men. The peculiar thing about him is that while fighting his grim and silent battle with death without the applause of a crowd, often without pay, and sometimes even without gratitude, he seems superior to all these considerations. He is responding to a higher sort of noblesse oblige which is almost unintelligible to the average man, out for the average prizes. Compared with the impetuosity of military men, the ecstasies of religious leaders, and the silent fortitude of starving artists, the frozen enthusiasm of the doctor is a very curious manifestation. It may be something in the training he gets, for, no matter what the youngster may have been, if he has anything in him, it will go hard if his practice as a physician does not bring it out. And to him belongs the final reward of service, which is the increased opportunity to serve."

COUNTY NEWS

ALAMEDA COUNTY

Alameda County Medical Association (reported by E. S. De Puy, secretary)—The Alameda County Medical Association held its regular monthly meeting January 15, at which time the following officers were declared elected: Pauline S. Nusbaumer, president; Charles McVey, vice-president; E. Spence De Puy, secretary-treasurer. The new council consists of Charles Coleman, A. Galbraith, A. M. Meads, George Rothganger, D. N. Richards, George G. Reinle.

The following scientific program was presented by the staff of Providence Hospital:

The Etiology of Diseases of the Kidneys, by C. T. Devine.

Eye Findings in Diseases of the Kidneys, by Frank S. Baxter.

Kidney Function Tests, by George G. Reinle.

Blood Chemistry of the Nephritides, by Eugene H. Barbera.

Diseases of the Kidney in Pregnancy, by C. A. De Puy.

Pyelonephritis in Children, by W. A. Wood.

Applicants for membership were N. N. Ashley and Bowles E. Rosenthal.

Baby Hospital Holds Annual Meeting—At the annual meeting of the Baby Hospital in Oakland, the following officers were elected: Board of Managers, Mrs. George Jensen, president; Mrs. J. George Moore, first vice-president; Mrs. Frederick Magee, second vice-president; Miss Edith Dunning, third vice-president; Mrs. William Cavalier, recording secretary; Mrs. Charles J. Youngberg, treasurer; Mrs. Frederick Magee, corresponding secretary. Officers of the various committees, board of managers, auxiliary board of managers, and board of directors were also elected.

CONTRA COSTA COUNTY

Contra Costa County Medical Society (reported by L. St. John Hely, secretary)—The regular monthly meeting of the Contra Costa County Medical Society was held January 27 at the Hotel Los Medanos, Pittsburg, the society being the guest of Dr. Marks.

After the transaction of routine business, Hans Lisser of San Francisco delivered a very interesting lecture, illustrated with lantern slides, on the subject of "Ductless Glands."

FRESNO COUNTY

Fresno County Medical Society (reported by John D. Morgan, secretary)—Regular meeting of Fresno County Medical Society was held February 6, 1923, at the General Hospital of Fresno County. Those present were: Aller, Anderson, Avery, Barrett, Bell, Couey, Cowan, Cross, Doyle, Craycroft, Deiderich, Ellsworth, Goldberg, James, Jamgothian, Jorgensen, Konigmacher, Kjaerbye, Lamkin, Larson, Madden, Manson, Miller, Montgomery, Mitchell, Morgan, Milholland, McPheeters, Pettis, Schiro, Schottstead, Sciaroni, F. W. Smith, T. D. Smith, Staniford, Scarboro, Thompson, Tillman, Tupper, J. R. Walker, G. W. Walker, Webster, and Wilson.

Visitors were: Dearborn of Madera; H. O. Collins, Director of General Hospital Fresno County; Eckhard, Pathologist at General Hospital; Matchke, Stewart, Fate, and Glidden, internes at General Hospital.

Herbert C. Moffitt of San Francisco was the speaker of the evening and presented a paper on "Clinical Types of Chronic Sphenomegaly."

H. O. Collins entertained Dr. Moffitt and mem-

bers of the staff of the General Hospital at luncheon on the day of the society meeting. This was followed by a very interesting clinic by Dr. Moffitt.

Staff of Fresno County Hospital Holds Annual Meeting—At the annual meeting of the staff of Fresno County Hospital L. R. Wilson was elected president of the organization, J. D. Morgan, vice-president, and F. P. Bell, secretary.

Okongi Sanitarium—It is reported that Dr. B. Okongi has completed his new sanitarium at E and Mono streets, Fresno, at a cost of \$35,000. The building is a one-story structure containing forty private rooms and one three-bed ward.

HUMBOLDT COUNTY

Humboldt County Medical Society (reported by L. A. Wing, secretary)—The society met at Eureka, with twenty-two members present. W. C. Alvarez and Carl L. Hoag of San Francisco were guests of the society. Alvarez gave a paper on stomach and bowel conditions, illustrated with lantern slides; and Hoag presented a paper on conditions of goitre, also illustrated by lantern slides.

The following officers were elected for the ensuing year: S. N. Jorgensen of Fortuna, president; O. R. Myers, Samoa, vice-president; John A. Lane, Eureka, treasurer; L. A. Wing, Eureka, secretary. Delegates to the State meeting will be E. L. Cottrell, Scotia; alternate, John N. Chain, Eureka. George B. Brown of Eureka and O. R. Myers of Samoa were elected to membership in the society. Preceding the business and scientific meeting a banquet was served.

KERN COUNTY

New Hospital for Taft—The Pacific Oil Company has secured permission to build at once a \$15,000 hospital at the corner of Center and Eighth streets in the city of Taft. The hospital will be for the care of the company's employees exclusively, and will be operated by the physicians of the medical department of the Pacific Oil Company.

LOS ANGELES COUNTY

Methodist Hospital of Southern California—The December report of this hospital shows 3246 patient days service. There were 88 major and 48 minor operations; 48 births and 9 deaths. Twenty patients were served at less than cost to the hospital and 16 without paying anything at all. The free work of the institution, expressed in money, was \$632.30, and \$417.75 worth of service was given to employees. A total of work at the expense of the hospital and not paid, of \$1445.63, was a very creditable showing for a hospital of this size.

Total receipts for the month were \$21,691.93 and the expenditures were \$27,080.27. Average cost per patient per day, \$6.25.

Santa Fe Hospital in Los Angeles to be Replaced—It is announced that the Santa Fe railway system is considering plans to reconstruct the present Santa Fe Hospital by sections so that in a short space of time the present building will be replaced by a more modern and commodious structure.

Merrill Corporation Hospital at Glendale—It is reported that excavation has been completed for the new class "A" hospital—whatever they may mean by that term—on Glendale boulevard, near Waverly. The building will be of reinforced concrete, three stories, 100 x 45 feet, and will cost \$65,000.

MENDOCINO COUNTY

Fort Bragg Hospital Changes Hands—It is reported that Dr. Campbell has disposed of his interest in the Fort Bragg Hospital and will locate in San Francisco. It is understood that Dr. Bowman has purchased the hospital and will reorganize and enlarge it.

MONTEREY COUNTY

Monterey County has appointed Dr. B. T. Tally as county health officer upon a full-time basis. It is reported that the International Health Board is subsidizing the health program for Monterey County, and its new health officer, Dr. Tally, formerly practicing physician in North Carolina, was selected by Dr. Farrell of the International Health Board for this position, replacing J. A. Beck, former county health officer.

ORANGE COUNTY

Orange County has adopted the full-time health department, reorganized its health department, and appointed Dr. W. Leland Mitchell as full-time health officer.

RIVERSIDE COUNTY

Riverside County Medical Society (reported by Thomas A. Card, secretary)—The regular meeting was held January 8 at the Mission Inn, where a banquet was given in honor of John C. King, who has recently retired from active practice. Thirty members of the society, with their guests, paid tribute to Dr. King's long and honored career as a physician and citizen, during which he was most prominent in the work of building up the aims, ideals, and organization of his profession in this community and State.

The roll-call of the charter members was read: three of the surviving members, James G. Baird, C. S. Dickson, and W. B. Payton, all of Riverside, were present. Their reminiscences of the early years of the society were very interesting. W. W. Beckett of Los Angeles spoke of the men of Southern California, who, twenty-five years ago, were the leaders in medicine and surgery. His address was very interesting and inspiring.

Dr. King was elected to honorary membership in the county society, and Paul E. Simonds proposed the formation of a medical library to be known as the John C. King Memorial Library.

L. K. Kington was recently appointed on the city health department.

Elsinore Sanitarium—According to press dispatches, Dr. M. A. Schütz is building a new addition to Elsinore Sanitarium. The building will be one hundred feet long by twenty-two feet wide, will be of hollow tile construction, and will cost \$10,000.

Kvello Hospital Opens—O. A. Kvello, M.D., has established a hospital at Hemet. A residence has been converted into an eight-room, private bed hospital.

SAN DIEGO COUNTY

San Diego County News (reported by Robert Pollock)—San Diego's infant mortality for 1922 of ninety-one deaths of infants under one year of age is a fine showing. This is equivalent to forty-eight deaths per thousand children born alive. In a report covering 519 cities in the United States, population from fifty thousand to one hundred thousand, this record gives San Diego third place. An enviable position indeed.

George Dock of Pasadena delivered an address on January 27 on "Diseases of the Heart," before the monthly staff meeting of the Naval Hospital in Balboa Park. Members of the medical society, to the number of about fifty, attended this meeting, and the paper, as well as the discussion which it called forth, were thoroughly enjoyed. Captain Wieber and his medical staff have the right idea in supplementing their scientific session with a discussion of a dietary menu in one of their social halls. Nothing contributes more to good fellowship among humans, including medicos, than the buffet lunch.

The annual meeting for election of officers of the San Diego County General Hospital staff was held

Monday evening, February 5. The officers elected for 1923 were: President, M. C. Harding; vice-president, Joseph F. Grant; secretary, L. H. Redellings. The staff, at the same meeting, adopted a new constitution and by-laws and set of regulations for the hospital.

The Sisters of Mercy, of St. Joseph's Hospital, on January 30 gave a dinner to the medical staff at the Maryland Hotel. Following the dinner brief talks on constructive ideas for the betterment of the work in the hospital were given by T. O. Burger, M. C. Harding, H. A. Thompson, J. E. Jennison, and Lyell C. Kinney.

SAN FRANCISCO COUNTY

Proceedings of the San Francisco County Medical Society (reported by J. H. Woolsey, secretary)—

The meeting of January 9 was a Pasteur memorial meeting. All papers are published in full in this number of the Journal.

At the Committee on Surgery meeting of July 16, J. F. Cowan read a paper on "The Etiology of Ununited Fractures." The Committee on Urology met January 30. Sidney Olsen was elected chairman and M. B. Wesson, secretary of the committee. "Beyronie's disease" was discussed by John G. Cheetham of Portland, Ore. "The Treatment of Ureters Following Nephrectomy for Tuberculosis" was the subject of L. R. Reynolds' paper.

The Eye, Ear, Nose, and Throat Section Met January 23, E. F. Glaser Presiding (reported by Frederick C. Cordes, secretary)—Victor Lucchetti presented a patient, who, two years previously, had one eye enucleated because of fear of sympathetic ophthalmia, and now had symptoms of loss of vision.

Hans Barkan presented a preliminary report on cataract extractions in the Vienna Clinic. Two hundred and forty-nine cataract cases were operated on by Meller in the Vienna Clinic between 1918-1922. The first fifty patients of this series were operated on immediately after the war. The patients were in poor physical condition, and between sixty-five and seventy-five years of age. New instruments were not obtainable and sterilization was done by means of oil lamps. In addition, there was no heat in the buildings, so that technical difficulties were marked. For the most part, the Hess operation was used. The results were very good, the percentage of complications being small. This is the more remarkable when one considers the difficulties under which Meller worked. In performing the operation three points were emphasized: (1) A large capsulotomy covering the entire pupillary area; (2) operating without a speculum; (3) did not emphasize the removal of cortical debris.

Pischel, in discussing the paper, laid special stress upon the necessity of the proper capsule forceps; while W. S. Franklin emphasized the reliability of the statistics presented. Nutting stated that, in reviewing Parker's cases in Detroit, he found fewer prolapses of iris after atropine had been used. Otto Barkan pointed out that Hess always used atropine, and Meller did not, and yet Meller had fewer prolapses, due to better post-operative care. The above paper will be published in full at a later date.

Leo Eloesser read a paper on plastic surgery of the face, stating that one can not produce an ideal face by plastic surgery. Experimentally, it has been shown that in the transplantation of free grafts into scar tissue the nerves regenerate, but the lymph vessels do not, so that as a result of this the resistance of this tissue is greatly reduced. Pedicle grafts are more desirable because of the lymph channels that are presented, but have the disadvantage of puckering at the base of the pedicle, where the graft has been turned. Eloesser overcomes this by means of a semi-detached graft; that is, by cutting through the skin, but leaving the

vessels below, thus avoiding the unsightly puckering. He presented a case of facial paralysis, in which a portion of the temporal muscle had been transplanted into the orbicularis of the lid with good results.

Charles Maghy read a paper on iritis with infection of the mucous membranes. In an analysis of 2796 cases, studied for an inflammation of the uveal tract, optic nerve or retina, Maghy found 112 cases which showed an infection of a mucous membrane, and which, after treatment in 97 cases, showed an improvement in vision which varied from 6/60 to 6/6. He pointed to the fact that it is only in recent years that the relationship existing between inflammations of the uveal tract and retina and those of a mucous membrane and the organs having an internal secretion have received thorough clinical and anatomical investigation. Although it has been claimed by many competent observers that a direct transmission from diseased teeth, infected tonsils, pus in the sinuses, cause irido-cyclitis, yet practically nothing is known concerning the routes of transmission that could in any way be considered positive and final.

There are many factors to be considered in the study of irido-cyclitis, such as changes in the organisms themselves, previous traumatism, fortuitous embolism, gastro-intestinal toxemias, and the anaphylactic state. Elschmig, quoted by the author, distinguishes two types: First, irido-cyclitis occurring especially in women in whom both eyes are attacked with K. P. posterior synechiae, and opacities in the vitreous; onset insidious and relapses frequent. Second, recurrent iritis; this form predominates in middle-aged women who are apparently healthy, followed by recovery, as a rule, without posterior synechiae; it invariably attacks only one eye, and there are frequent relapses with ultimate blindness. In the more severe cases there is ciliary injection, deposits on the posterior surface of the cornea and floating opacities in the vitreous. In some cases an initial attack of glaucoma is present at the onset. As time goes on, more and more posterior synechiae are formed, membranes appear in the pupil, and later cataract. In the most serious cases the eye becomes soft, and it is these cases that are so hopeless and end in total blindness.

In the discussion, Hans Barkan brought out the fact that many cases of iritis are probably not due to focal infection and emphasized the necessity of a careful general examination; Pischel protested against the unnecessary wholesale removal of teeth. Otto Barkan told of a case of acute iritis due to a seminal vesical infection that recurred upon massage of the site of infection.

St. Joseph's Hospital has Busy Quarter—Well attended meetings of St. Joseph's Hospital staff of San Francisco and increased activities in all parts of the institution have characterized the beginning of 1922.

On January 10 C. E. French discussed the "Latest Observations in the Clinics of Central Europe." Case records were presented by T. I. Janes (chronic interstitial nephritis), E. T. Krebs (pelvic peritonitis) and O. Laist (senile gangrene). W. T. Cummins, pathologist, closed with a "Commemoration of Louis Pasteur," his labors being ably sketched.

"Orthopedic Evening" was observed February 14, and the features enjoyed were "Congenital Hip Dislocation," E. H. Smith; "Treatment of Non-Tubercular Osteoarthritis," F. J. Carlson, and "Tubercular Joint Disease," S. J. Hunkin. "Recent Progress in Orthopedics" by F. A. Lowe was put over for March, as was the general discussion.

Reports were received on the downtown clinic, the Benedict basal metabolism outfit and instructive histories by Drossel, Riley, Overstreet, Lowe, C. E. Taylor, and A. S. Musante on trunk, limb, and head lesions.

For March 14 the program prepared included

"Value of Hospital Records," by J. M. Stowell and Lowe's paper on orthopedics.

SAN JOAQUIN COUNTY

San Joaquin County Medical Society (reported by H. S. Chapman, secretary)—The San Joaquin County Society held its monthly meeting in the Receiving State Hospital on the first day of February, 1923.

Those present were: Dameron, Walker, B. J. Powell, Holliger, Ray, McGurk, Sanderson, Arthur, Conzelman, Kaplan, Goodman, McCoskey, Marnell, Margaret Smythe, Friedberger, D. R. Powell, and Dozier, with F. F. Gundrum of Sacramento, Chesley Bush of Alameda County, and C. Durand of Colfax as guests.

C. J. Durand's paper on "Some Complications of Pulmonary Tuberculosis and Their Treatment" contained many salient facts among which were:

Pulmonary Hemorrhage—M. S. in moderation so as not to totally arrest cough; calcium short time only; rest in bed; in sanatoria artificial pneumothorax. Effusion ushered in with high fever, etc. If it does not abate remove and replace with nitrogen. Pneumothorax generally late complication; sudden in onset; succussion and coin sound; if symptoms aggravated suspect empyema. **Laryngitis**—Spray (1) with Rx-menthol, camphor and eucalyptus in alcohol; (2) cocaine before meals; (3) rest throat; use pad and pencil; chalmogro oil not successful. **Peritonitis**—Aided by opening, but often a shock to pulmonary; Saranac school use quartz vapor lamp.

Chesley Bush, superintendent of Arroyo Sanatorium discussed the Alameda plan, as follows:

Incipient and favorable moderately advanced to Arroyo: more advance to Tuberculosis Branch County Hospital. County Hospital wards visited regularly, and cases showing improvement transferred to Arroyo. Cases educated and gradually put to work. Thirty children with glandular and bone cases receive lessons, etc.

Results: 33 1/3 per cent apparently cured; 30 per cent brought to quiescent. Follow up of discharged, if do not report to Health Clinic.

Dr. F. F. Gundrum of Sacramento, on Coincident Diseases of Tuberculosis and their treatment:

Early Tubercular Cases—Percussion of little use. Auscultation spot of fine rales, persisting several days; in absence history flu.

Sputum may help; X-ray probably overvalued, symptoms the main reliance.

Differentiate—malaria by quinine; typhoid by widal and course; mitral stenosis by auscultation.

Tubercular still in position to contract diseases, so staffs should not be all purely tubercular men.

Discussion was indulged in by Goodman, Friedberger, Marnell, McGurk, and Dameron.

San Joaquin County has completed the plans for reorganization of its health department and has employed Dr. Lewis F. Badger as full-time county health officer.

SANTA BARBARA COUNTY

Santa Barbara County Medical Society (reported by A. C. Soper, secretary)—The society met on January 8 at the Samarkand Hotel, devoting the first half-hour to good fellowship, before the dinner at 7:30, which was served in the large dining-room of the hotel, with thirty-two members present. There were also present the following visitors and guests: George W. Tape, Paso Robles; W. R. Livingston, Oxnard; E. M. Culver, New York; H. F. Rey, Oxnard; three interns from the Cottage Hospital, Koetter, Isaac and Cryst, and Mr. G. W. Curtis, superintendent of the Cottage Hospital.

A comic and hypothetical "case report" by one fictitious Dr. Terence O'Shaugnessy of the Dublin Rotunda was handed to the secretary and read by

him, to the amusement of those present—author unknown, but suspected.

Dr. Tape gave an interesting talk on his early days of practice on the Pacific Coast in the 80's.

The following officers were elected for 1923: P. C. Means, president; G. R. Luton, vice-president; O. C. Jones, first vice-president at large; Robert W. Brown, second vice-president at large; A. C. Soper Jr., re-elected secretary-treasurer.

At the meeting held on January 22, there were ten members present and the following guests: Interns Koetter and Cryst and Dr. Holcombe of Portland, Ore.; G. C. Wagner of Tacoma, and Dr. Mullitt.

G. C. Wagner gave a very able discourse on the results of his seven years experience with the ultra violet rays, and its apparent value in many types of disease abnormalities. Discussion by Ullmann, Hotchkiss, Blatherwidk, Means, Mellinger, and Cunnane.

Votes on delegate and alternate for the State convention resulted in the election of Franklin R. Nuzum as delegate, and George R. Luton as alternate.

SONOMA COUNTY

Sonoma County Plans Three-Year Tax for New Hospital—The present Sonoma County Hospital at Santa Rosa has been receiving considerable undesirable publicity. The result is an aroused public sentiment to improve hospital conditions for the poor. There are, as usual, two principal elements in this discussion; one group wants to build a new county hospital and operate it under the political county government; the other group wants to subsidize private hospitals by paying them a per diem for patients who are the proper charge of the county.

TULARE COUNTY

Tulare County Health Center Elects Officers—John C. Payne, has been elected chairman of the Tulare County Health Center; E. R. Zumwalt, physician in charge of the children's department; Edgar T. Smith, in charge of the dental department; Ray Rosson, the medical department; W. C. Zeller, eye, ear, nose and throat department, and I. H. Betts, surgical department.

Many affections which art has to strive against might be easily shown to be vital to the well-being of society. Hydrocephalus, tabes mesenterica, and other similar maladies, are natural agencies which cut off the children of races that are sinking below the decent minimum which nature has established as the condition of viability, before they reach the age of reproduction. They are really not so much diseases, as manifestations of congenital incapacity for life; the race would be ruined if art could ever learn always to preserve the individuals subject to them. We must do the best we can for them, but we ought also to know what these "diseases" mean.—Holmes' Medical Essays.

One practical hint may not be out of place here. It seems to be sometimes forgotten, by those who must know the fact, that the tongue is very different, anatomically and physiologically, from the stomach. Its condition does not in the least imply a similar one of the stomach, which is a very different structure, covered with a different kind of epithelium, and furnished with entirely different secretions. A silversmith will, for a dollar, make a small hoe, of solid silver, which will last for centuries, and will give a patient more comfort, used for the removal of the accumulated epithelium and fungous growths which constitute the "fur," than many a prescription with a splitfooted R before it, addressed to the parts out of reach.—Holmes' Medical Essays.

BOOK REVIEWS

Text-Book on Minor Surgery. By John C. Vaughn and Athel C. Burnham, M. D. 627 pages, illustrated with 459 engravings; \$7.75. Philadelphia and New York: Lea and Febiger. 1922.

A very good book on the better methods in minor surgery, written in a clear impressive way and well illustrated. It should be useful to those interested particularly in minor surgery and local anesthesia, such as the industrial surgeon. L. C. G.

Animal Parasites and Human Disease. By Asa C. Chandler, M. S., Ph. D., Instructor in Biology, Rice Institute, Houston, Texas. Second edition, revised. New York: John Wiley & Sons, Inc. 1922. Price, \$4.50.

This is what it purports to be, a text for public health officers, teachers of hygiene, college students, and laymen. The book deals in an interesting manner with the main biological facts and the practical aspects of human parasitization by protozoa, "worms," and arthropods. Compiled very conservatively from the best authorities, it is more accurate than the average text, and reaches a remarkably even standard of excellence in all of its divisions. The modernization of the pages concerning Flagellates is most commendable. However, the far better drawings of chilomastix by Swezy could be substituted to advantage for those by Wenyon. Likewise, it is to be hoped that the atrocious old drawings of giardia, active and cyst, will finally cease to be copied. Wenyon, Swezy, Simon, and others have published replicas of the parasite, which really resemble it as encountered in the routine examination of the stool. The subject of Amebic Dysentery is well presented, but the author has too much faith in the rapid cure of long-standing cases by a few doses of emetin. Extensive thickening and scarring of the colon is beyond repair by emetin, and means permanent impairment of function. In the section on "Worms" the need of a good plate, preferably in color, and drawn to scale, is evident. It should show the different ova in detail, not so much for the purpose of differentiating the varieties from one another, but to differentiate them from confusing vegetable residues in stools. The quality of the book should give it a commanding position in a field in which there is too little competition. M. C. C.

Gonorrhea and Impotency. Modern treatment. By Edwin W. Hirsch, S. B., M. D. 172 pages. Illustrated. Chicago: The Solar Press. 1922.

This book contains nothing new. There are a few hints that may be useful to an office nurse taking care of catheters, sounds, and other instruments, some absurdities, a great many naive statements and descriptions, as well as an excessive number of misprints and grammatical errors.

The author, repeating what others have said many times before him, expresses some thoughts about venereal prophylaxis, and also seems to have acquired good ideas on what he calls the "urethroscopic craze," but we are sure that his enthusiasm in regard to the therapeutic efficiency of the quartz lamp, ultra violet rays and diathermy will sooner or later cool down.

The numerous illustrations are more apt to impress the layman than the medical man. V. G. V.

Principles and Practice of X-ray Technic for Diagnosis. By John A. Metzger, M. D. 144 pages. Illustrated. St. Louis: C. V. Mosby Co. 1922. Price, \$2.75.

When a new book on X-ray technic appears, one

reads it over with the hope that at last a practical manual has been produced, one which could be put into the hands of the budding roentgenologist, or given to the technician as a guide to the technical side of X-ray work. This was my feeling when asked to read and review "Principles and Practice of X-Ray Technic for Diagnosis," by Dr. J. A. Metzger, but I am afraid we are doomed to another disappointment, as I find that this book lacks one of the great requirements of such a handbook—accuracy. It would seem most likely that part of the trouble is due to a superficial reading of the proofs, though such inaccuracies as the following are hardly excusable.

For example, we are told to take mastoids with the patient prone "place the patient face downward on the table" and we are given "Figure 11, Position for Mastoid," in which the patient is seen lying on her side. I am sure there is a typographical error on page 33 and that "pyelogram" is not the word intended to be used in line 7. Again, we are told quite a bit about the sweet eye localizer, and given a cut and a chart of another localizer, I believe a Kelley-Koett apparatus.

There are many other little inaccuracies seen in the text. We cannot agree with the writer in what he says about tank developing, and I think it would be quite inconvenient to remove all of the screens from the cassettes when not in use, as the book suggests. It would be quite difficult to produce a book on technic that would suit all roentgenologists, as each has his own way of doing things, but a book on technic to be generally useful in the hands of a technician to fill the needed gap must be really accurate.

M. D.

Endocrine Glands and the Sympathetic System. By P. Lereboullet, P. Harvier, H. Carrion, and A. G. Guillaume. Translated by F. Raoul Mason, M.D., with the collaboration of Daniel R. Ayres, A.B., M.D. 378 pages. Philadelphia and London: J. B. Lippincott Company. 1922.

This volume is an attempt to put in one book some of the current opinions of French clinicians concerning the relationship between the ductless glands and the sympathetic nervous system. While it advances nothing distinctly new, the book is replete with observations and suggestions that will merit further investigation.

Harvier, in his chapter on the thyroid, pays no attention to the work of the Americans—Marine and Kimball, nor is the work of Kendall sufficiently stressed. The syndromes are described, and nothing particularly new is added.

There is an interesting chapter on the hypophysis, the writer, however, being a little too certain concerning this much-mooted subject. Our ideas concerning the action of this gland may have to be entirely revised, due to the recent brilliant work of Carmus and Roussy in France, and Bailey and Bremer in this country.

Perhaps the most stimulating chapter in the book is that by Guillaume on the sympathetic system. After calling attention to the work of Bichat and Langley, and the English school, he correlates certain clinical syndrome, such as gastric crisis, Raynaud's disease, angio-neurotic edema and intermittent periodic hydrarthrosis with the function of the sympathetic system.

In the main, the book may be recommended to those who are especially interested in this branch of medicine, but for the beginner or the none-too-well read physician on endocrinology, the volume may make for confusion worse confounded.

R. A. Y.

Elements of Scientific Psychology. By Knight Dunlap. 368 pages. Illustrated. St. Louis: C. V. Mosby Company. 1922. Price, \$3.50.

Time was when psychology was a parlor pastime,

but it has edged, little by little, into the workshop, and this is distinctly a workshop psychology. The title "Scientific Psychology," at first thought, evokes similar titles, such as "Scientific Physiology" and "Scientific Biology," and the only justification for such tautology is the existence of so much present-day balderdash, masquerading as psychology, and the felt need of some distinction between the older speculative science and the modern experimental one.

The author, in the introduction, says that academic psychology is very little indebted to the clinic or pathology for any advances. Set against this Mercier's statement that academic psychology is valueless to a psychiatrist, and you see a situation that is much in need of remedy. There should be full co-operation of the two. Certainly medicine needs psychology, and a book of this sort should be in the library of every physician, and very frequently in his hands. At the same time the academic psychologist ought to be able to get a great deal from the clinic.

Another statement from Dunlap's introduction challenges attention:

"Psychology is being applied in the fields of education, industry and the arts, and will undoubtedly be applied to medicine before long."

In other words, the school teacher, the candy manufacturer and the sign painter are using psychology, while the physician is not—though he will eventually. A more sympathetic association with the clinic might have shown that even the medical man is applying it.

E. W. T.

BOOKS RECEIVED

The Successful Physician. By Verlin C. Thomas, M.D., visiting physician to Franklin Hospital, San Francisco. Philadelphia and London: W. B. Saunders Company, 1923.

Exercise in Education and Medicine. By R. Tait McKenzie, M.D., LL.D., McGill University, Professor of Physical Education and Physical Therapy and Director of the Department of Physical Education, University of Pennsylvania. Third Edition, thoroughly revised. Philadelphia and London: W. B. Saunders Co., 1923.

Practical Infant Feeding. By Lewis Webb Hill, M.D. 483 pages. Illustrated. Philadelphia and London: W. B. Saunders Co., 1922.

Vital Statistics, an Introduction to the Science of Demography. By George Chandler Whipple, Professor of Sanitary Engineering in Harvard University, Member of Public Health Council, Massachusetts State Department of Public Health. Second Edition. New York: John Wiley & Sons, Inc., London: Chapman & Hall, Limited, 1923.

Nutrition of Mother and Child. By C. Ulysses Moore, M.D., M.Sc. (Ped.), Instructor in Diseases of Children, University of Oregon Medical School, including menus and recipes by Myrtle Josephine Ferguson, B.S., B.S. in H.Ec., Professor of Nutrition, Iowa State College, Ames, Iowa. 33 illustrations. Philadelphia and London: J. B. Lippincott Company.

Pharmacology and Therapeutics

COUNCIL ON PHARMACY AND CHEMISTRY OF THE A. M. A.

(Reported by W. A. Puckner, Secretary)

The January report of the Council on Pharmacy and Chemistry notices a number of new remedies admitted to New and Non-official Remedies, as well as some interesting data about other remedies.

Bacillus Acidophilus Milk-Lederle—Lederle Antitoxin Laboratories.

PROPAGANDA FOR REFORM

The Disappointments of Hexamethylenamin—Hexamethylenamin has joined the large and growing group of drugs of which much has been expected, but which have failed to justify the hopes of their champions. The use to which hexamethylenamin is still devoted with apparent scientific justification is in preventing the growth of microorganisms in the urinary tract and in destroying them when they are present in the urine in infectious diseases, such as typhoid fever. The drug is recommended as an antiseptic in cystitis, and as a prophylactic prior to operations on the urinary tract.

Its possible efficacy, however, depends on the elimination through the kidneys with a urine that remains distinctly acid in reaction; otherwise, no benefit is to be expected. Hexamethylenamin has no material antiseptic value as an antiseptic in the cerebrospinal fluid during spinal meningitis. It is not a uric acid solvent. Finally, the drug has been shown to have no diuretic potency. Furthermore, hexamethylenamin is said to be liable to produce renal irritation when the dosage is large or the use protracted. (Jour. A. M. A., January 6, 1923, p. 37.)

Horovitz Protein Substance No. 10—The composition of No. 10 protein substance for syphilis of the Horovitz Biochemic Laboratories is essentially secret. The claims made are unwarranted and may lead physicians to use the product unwisely. A. S. Horovitz, president of the Horovitz Biochemic Laboratories, was referred to in connection with the asserted cancer cure "autolysin" (The Horovitz-Beebe Treatment for Cancer, Jour. A. M. A., July 24, 1915, p. 336). Later, he was connected with the Wm. S. Merrell Co., and appears to have been responsible for this firm's line of "proteogens," which the Council on Pharmacy and Chemistry declared inadmissible to New and Non-official Remedies in 1919. The claims advanced for the products marketed by the Horovitz Biochemic Laboratories bear a striking resemblance to those advanced for the Merrell proteogens. As in the case of proteogens, the Horovitz laboratories have a list of "protein substances," each of which is claimed to be more or less specific against a given disease or condition. (Jour. A. M. A., January 6, 1923, p. 54.)

More Misbranded Nostrums—The following products have been the subject of prosecution by the Federal authorities charged with the enforcement of the Food and Drugs Act: C. J. C. regulator (C. J. Czarnecki), containing iron chloride, a small amount of plant material, a trace of oil of tansy and alcohol. C. J. C. liniment (C. J. Czarnecki), containing camphor, menthol, chloral hydrate, ether, ammonia water, and alcohol. Allan's red wash and sandalwood emulsion compound (Allan-Pfeiffer Chemical Co.); Allan's red wash (Allan-Pfeiffer Chemical Co.), containing zinc sulphate, boric acid, and phenol, eucalyptol, a trace of alkaloid and water and sandalwood emulsion compound (Allan-Pfeiffer Chemical Co.), containing santal oil, mineral oil, methyl salicylate, copaiba, a small amount of magnesium and calcium salts and water. Parrott mixture (Allan-Pfeiffer Chemical Co.), consisting of an emulsion of turpentine oil, methyl salicylate, camphor, copaiba, gum, and water. Parrott sexual pills

(Allan-Pfeiffer Chemical Co.), containing strychnin and a compound of iron and phosphorus. Am-O-Lox ointment (Am-O-Lox Co.), consisting essentially of zinc oxid, sulphur, phenol, methyl salicylate and a small amount of dye in a base composed of petrolatum and paraffin. Am-O-Lox prescription (Am-O-Lox Co.), consisting essentially of glycerin, carbolic acid, salicylic acid, methyl salicylate, alcohol, water, and coloring matter. Vigeron (Sydney Ross Co.), sugar-coated pills containing compounds of iron, zinc, manganese, arsenic, phosphorus, and strychnin. (Jour. A. M. A., January 6, 1923, p. 53.)

Present Status of Insulin—The investigators of "Insulin," the new pancreatic extract proposed for the treatment of diabetes, have applied for a patent on the product in Canada, United States, and Great Britain. The patent for Canada and the United States has been tendered, when granted, to the University of Toronto. The University proposes to safeguard the product against commercial exploitation and to ensure the marketing of a standardized product. From the present indications it is hoped that the experimental period will be ended during the first half of 1923, so that the product will become available. Dr. McLeod believes that "insulin" will never entirely replace careful dietary regulations, but that it is of undoubted value in assisting the weakened power to metabolize carbohydrates.

It is to be hoped that the University of Toronto will be able to control the advertising claims and methods of marketing of the product. (Jour. A. M. A., January 6, 1923, p. 36.)

Antiberiberi Vitamin Concentrate—Metz—The Council on Pharmacy and Chemistry reports that the Metz Laboratories have requested the acceptance for New and Non-official Remedies of Antiberiberi Vitamin Concentrate—Metz. The firm supplied adequate information in regard to the process whereby the product is obtained, and has presented evidence to show that the potency of the product is controlled by adequate animal tests. The firm, however, presented no proof to indicate that the product is of value, therapeutically, in human beings, and hence it could not be admitted to New and Non-official Remedies. The firm wished to make available to students and investigators of nutrition a product which is claimed to be antineuritic (anti-beriberi) when fed to pigeons. It increases the food intake of rats fed on substance deficient in vitamin B and causes increased weight, but not to the same extent as does the vitamin B (according to McCollum's nomenclature). The Council deemed that from a scientific standpoint antiberiberi vitamin concentrate (Metz) is suitable for study, suitable for animal experiments and for controlled experiments on man, and hence authorized publication of a preliminary report.

Antiberiberi vitamin concentrate (Metz) is prepared from brewers' yeast.

The vitamin extract is standardized so that 0.065 gm. shall represent the anti-neuritic potency of 10 gm. of freshly pressed brewers' yeast. The product is marketed in the form of powder tablets, and solution (1 cc. containing the anti-neuritic potency of 10 gm. freshly pressed brewers' yeast). (Jour. A. M. A., December 13, 1922, p. 106.)

Culture-Lac Omitted from N. N. R. and Optolactin Not Accepted—Culture-Lac is described in New and Non-official Remedies, 1922, as a culture of bacillus bulgaricus manufactured by the Geck Laboratories, New York. The Special Pharmacal Co., Inc., Buffalo, N. Y., advised the Council on Pharmacy and Chemistry that it now owned culture-lac. The product now marketed, however, is not the preparation described in New and Non-official Remedies as culture-lac, but is said to be a culture containing bacillus acidophilus and bacillus bulgaricus. The council directed that the culture-lac of the Geck Laboratories be omitted from New and Non-official Remedies because it is off the market. The council declared the culture-lac of the Special Pharmacal Co., Inc., to be inadmissible to New

and Non-official Remedies, (1) because there is no acceptable evidence for the administration of a mixture of *B. bulgaricus* and *B. acidophilus*, and (2) because the preparation was marketed with unwarranted therapeutic claims.

Optolactin is the name applied by Fairchild Bros. and Foster to a tablet said to contain mixed cultures of *B. bulgaricus* and *B. acidophilus*. The Council on Pharmacy and Chemistry declared optolactin inadmissible to New and Non-official Remedies, (1) because there is no acceptable evidence for the use of the mixture; (2) because its name is not descriptive of the composition; and (3) because the circular accompanying the trade package is likely to lead to the ill-advised use of optolactin by the public. (Jour. A. M. A., January 13, 1923, p. 127.)

Bacillus Acidophilus and Intestinal Putrefaction—While the administration of soured milk products is at times beneficial, the cause of this beneficial action is still undetermined. The belief that the Bulgarian bacillus can be permanently implanted in the intestinal tract and that this implantation is responsible for the effects is no longer tenable. Of late, attention has been called to the effects of the administration of milk cultures of bacillus acidophilus, which is stated to be a normal inhabitant of the human intestinal tract.

It is reported that this bacillus may be successfully implanted in the intestinal tract, provided a suitable pabulum is provided. It has been assumed that the acidity of putrefactive organisms would be almost entirely suppressed by a change of the flora produced by the administration of milk containing cultures of bacillus acidophilus and that with such implantation, the somewhat hypothetical toxic products charged with harm to the body might also be expected to be suppressed. If indican excretion, however, may be taken as an index of intestinal putrefaction, it now appears that implantation of bacillus acidophilus in the intestine does not lower the putrefactive process.

This suggests that favorable clinical effects produced by the administration of lactose cultures of bacillus acidophilus are not primarily dependent on decreased production of the antecedents of indican. (Jour. A. M. A., January 20, 1923, p. 186.)

Neisser-San-Kahn not Accepted for N. N. R.—Neisser-san-kahn is marketed by the York Laboratories as "a new genito-urinary product," with the claim that "in neisser-san-kahn the genito-urinary surgeon has at his command a new salt of marked value in urethral infections." The product is said to be a definite chemical body, zinc borosalicylate.

Neisser-san-kahn is claimed to be a new chemical compound. A preparation claimed to be zinc borosalicylate, however, was introduced about ten years ago (in Germany) as "mucosan," with claims similar to those now made for neisser-san-kahn. The Council on Pharmacy and Chemistry declared neisser-san-kahn inadmissible to New and Non-official Remedies, (1) because it is an unoriginal preparation under a proprietary non-descriptive name which the council cannot recognize because the York Laboratories are not the discoverers of the product to which the name is applied; (2) the therapeutic claims are unwarranted; and (3) the available evidence fails to show that the preparation claimed to be zinc borosalicylate has any advantage over established zinc salts. (Jour. A. M. A., January 20, 1923, p. 201.)

Quayle's "Bob-White Habit Sinkers"—Charles H. Quayle, M.D., of Madison, Ohio, "Medical Director" of the "Dr. Quayle's Sanitarium, a Retreat for Drug Addicts, Alcoholics, and Cigarette Inveterates" and "Specialist in Drug and Liquor Addiction," has been exploiting an alleged cure for chronic morphinism "and any other drug addiction." Formerly the treatment was "not for sale to any layman or person who wishes to treat himself" and physicians were importuned to use it. Today we find the Quayle's product advertised in the Police

Gazette and similar literary productions. A "treatment" was purchased by a layman (for \$25) and turned over to the A. M. A. Chemical Laboratory for analysis. The "treatment" consisted of four boxes of pills, labeled as follows:

"No. 1—Eliminative." (Contained three chocolate-coated pills and one capsule.)

"No. 2—Antidote." Contained 323 yellow-coated tablets.)

"No. 3—Nerve Tonic." (Contained thirty-seven red-coated pills.)

"Special Eliminative Bowel Tablets." (Contained twelve white-coated tablets.)

The analysis demonstrated that the "treatment" is essentially (1) active elimination by cathartics, (2) the administration of atropin during the stage of morphin withdrawal, and (3) the use of strychnin at the close of the "treatment." It is evident that this is no more a cure than could be devised by any physician who is familiar with modern medical literature. No physician will believe that a patient suffering from chronic morphinism can cure himself by any such method as that exploited by Quayle (Jour. A. M. A., January 27, 1923, p. 270.)

Child Hygiene and Private Physician—There is just as much need of health work among the children of the middle and well-to-do classes of society as among those of the poorer classes, says Borden S. Veeder, St. Louis (Journal A. M. A., December 30, 1922). The best results can be obtained only if there is direct and constant supervision of the child through infancy and childhood by one physician, who sees the child in sickness as well as in health, and who has an intimate and personal knowledge of its parents, its home life and daily environment, its play and companions. Without a full knowledge of all of these factors, the value of direct supervision is limited and handicapped. Furthermore, this supervision must reach the children of all classes and must not be limited to the economically dependent. The person in the ideal position to supervise the health and welfare of the infant and child is the private physician—the man in general practice. If this is true, the question naturally arises, Why, then, is this work not done by the private physicians? Why the necessity for the welfare clinic or conference? The answer is simple: Unfortunately, the vast majority of physicians in private practice are not qualified to supervise the development of the infant and child. Few recognize its importance; fewer still are interested, and, most important, even fewer have been trained to apply in general practice the methods which have met with such success in infant and child hygiene work. The fault or blame lies in the training and education of the private physician. In the past—and the same holds to a large extent at present—medical students have been trained to think in terms of disease rather than of health, and teaching, which has been almost entirely in hospitals or dispensaries, has been directed almost exclusively to the recognition and treatment of pathologic conditions. Such teaching as the student has received in hygiene or health has been of an abstract nature and not concretely applied to the individual. The lack of knowledge on the part of the private physician in regard to the hygiene and development of the infant and child is the fault of the physician's training, not of the physician. There must be a distinct change in the character of pediatric teaching, and this change is already taking place in better medical schools. For example, instead of spending hours over the classification and pathologic physiology of the nutritional diseases of infancy, the point that must be emphasized and driven home is the care and feeding of the normal infant; the prevention of disease must be stressed equally with the pathogenesis, diagnosis, and treatment. When this is done, physicians will be interested in giving ideal supervision to the infant and child.

Nevada State Medical Association

Nevada State Medical Association News—Post-Card Bulletin, No. 1, Vol. 5 of the association says:

"Well, here we are again after two months of silence during which time ye editor has been galivanting all over the United States—and part of West Virginia. There is a song which states that 'The longest way round is the shortest way home,' but we have found that shipping our goods from Goldfield to Reno by way of New York City is certainly not the cheapest. Your secretary suffered some kind of a brainstorm, the first of December, thought he wanted to live in N'Yawk, and didn't know any better until he got there and took a couple of looks, but now he knows that there is no place like the land of the west, with its sand and sagebrush. We promise to be good from now on, and hope to soon make up for lost time. Our new president has made the committee appointments for the year, and we will try to get them in the next issue, but we want to use most of this on legislative matters. There are three bills, so far, of special interest to the medical profession: one to repeal the present State dry law so that an entire new Act can be passed, a bill to ratify the Sheppard-Towner Act, and a bill to regulate the practice of nursing. There is also a chiropractic bill, of which you will hear more later. Get after your legislators to defeat the bill to ratify the Sheppard-Towner Act, and make it strong. We object to the bill on the following grounds: (1) There is no real need of such legislation in Nevada, as the maternity situation is being well taken care of. (2) The bill does not provide any material relief for mother or child, and certainly does not provide the relief that the women of the country ask for. (3) It is socialistic and paternalistic in character, precedent government control. (4) Its ratification will enforce a double tax; Federal tax and then State tax. (5) It is an Act of fines and rewards, with unequal distribution of tax moneys. (6) It is simply an appropriation measure which will spend a considerable amount of money in giving easy jobs to propagandists, who use sympathetic promises to further their own interests. (7) The application of the law will require the services of a number of nurses, and we all know how hard it is to get a real nurse now without having any more of them tied up in public work. Get busy and do all that you can, and do it now. We are now ready to receive dues and you can address us as follows: Dr. Horace J. Brown, Sec'y, No. 14, Thoma-Bigelow building, Reno, Nev. We will send out statements to everybody as soon as possible. Merry Christmas and Happy New Year (even if it is a little late)."

Nevada Medical Bulletin, Reno, Nev., January 15, 1923—As this delayed edition goes to press the Legislature is in full swing, and you can take it from us that when it comes to swinging a nasty club those legislators are the duck's quack. Our special committee that conferred with the committee from the Nurses' Association, and our Judiciary Committee labored hard and finally brought forth a nurses' registration bill that seemed absolutely fair to all concerned, and we all felt sure that it had a good chance to pass, but they wouldn't even let us talk to them about it. They hauled it out of committee one quiet afternoon, shoved it into the abattoir, and the next we knew it was hanging on a hook with its nose shiny and its hat on crooked. However, it has been reintroduced in the Assembly and we hope it will receive more consideration. If you can do anything to help, please do so at once, and no matter how you feel about it the secretary would like to hear from you in

regards to it. The nurses surely deserve to have some kind of a law that will keep absolute impostors from infringing on their rights. It looks now as if the Legislature will adopt the Volstead law as the law of the State, which is very satisfactory to us, so do not fail to write your legislators to vote for it. The Judiciary Committee of our Association has had introduced in the Senate a bill providing for the establishment of a public general hospital in such counties as desire (and vote for) one. Its purpose is to provide ample facilities for the sick and disabled, and such hospitals will be open to every regular physician. If passed it will allow Elko County to legally use to full advantage its beautiful new hospital, and it is probable that Washoe County will petition for a vote to give them an ample, modern institution that will be recognized by the A. C. S. and A. M. A. We sent out statements a few days ago, and a few of our members have responded with the necessary check to cover dues, but the great mass are evidently still paying Christmas bills—or else they are too busy to write checks. We are sorry to note that a few are so far in arrears that we will have to drop them from our rolls unless they pay up before March 1. We don't want to lose any, so if you happen to be one of the tardy ones shake the baby's bank and let's hear from you. When do you want the annual meeting, June or October?

"Big Noises."—Bruno Lessing, (San Francisco "Examiner") philosophizes about "Big Noises" in the law, the church and in medicine.

"Empty vessels sound the loudest. The big bass drum can make more noise than the violin or the cello. One cow eats more than a hundred nightingales.

"These are the reflections of thinking people when they behold the clamoring notoriety-seeker trying to attract attention to himself. As a rule the man who mounts to the housetop and shouts, 'I am the greatest in my line,' is merely an object of ridicule. The exception to the rule, however, appears when people believe him and ultimately pay for being disillusioned.

"When Dr. Quackus tells the world that he can cure tuberculosis, cancer and rheumatism he attracts attention. Thousands flock to him. He becomes famous overnight. Unfortunately very few ever hear of the ultimate fate of those thousands. They are never cured by Dr. Quackus.

"The great physician does not yell aloud. He does not advertise. He doesn't arouse false hopes. He is not a bass drum.

"It is exactly the same in every other line of human endeavor. Counselor Shyster, whose name appears in the public press every day, in connection with everything that is going on, is never the best lawyer. A really good lawyer—leaving dignity aside—is too busy with his cases to rush into print.

"The Rev. Dr. Cockroach is not a great clergyman. Rabbi Wischeimer is not a great rabbi. These people are politicians, to an extent, devoting to their self-aggrandizement the time that they should devote to pious thoughts and deeds of charity.

"Every newspaper reporter will corroborate this fact; the greater and abler the physician, the lawyer or the preacher, the more reluctant he is to grant an interview—and, the more of a charlatan he is, the more eagerly will he talk.

"The trouble comes when ignorant souls, in distress, seek the counsel of such people. How can they find a really able physician or lawyer or divine? What can be done to steer them away from these self-inflated names that attract them?

"It is a problem that has bothered many an intellectual mind. What solution would you suggest?"

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REPORT OF THE INDUSTRIAL ACCIDENT COMMISSION

Abstract of Those Points of Interest to Physicians

The outstanding fact in the Annual Report of the Industrial Accident Commission of the State of California, as submitted to Governor William D. Stephens, is that there was a decrease of 42 industrial deaths in 1921 as compared to 1920, the totals respectively being 550 and 592. The statistics further show a reduction of 38.39 per cent in the industrial death rate of California for the calendar years 1914 to 1921, inclusive.

There were 1643 permanent injuries reported in 1921 to the commission, as compared to 1929 in 1920. There was also a reduction in temporary injuries, as shown by the totals of 123,336 in 1921 and 131,587 in 1920. In 1921 temporary injuries to the total of 60,685 did not cause loss of time from work.

Out of the 550 deaths last year there were 453 compensable, and the remaining 97 did not come under the commission's jurisdiction. The record shows that 114 were caused by varied classifications; 98 by railroad, vessel and stevedoring operations; 90 by construction; 78 by manufacturing; 71 by public utilities; 53 by mining, quarrying and oil producing; 46 by agriculture.

There were 5 women killed while at work in 1921; the similar total in 1920 was 3.

Total dependents to the number of 701 resulted from 302 fatalities, 117 partial dependents were left in 59 cases, in 159 cases there were no dependents, and in 30 cases the degree of dependency was unknown. The average age of the widows was 38.7 years. The dependent children averaged 8.8 years.

The average age of the 550 workers killed during 1921 was 38 years. The average wage was \$33.39 a week. In 1920 the average age in the fatal cases was 37 years and the average wage \$31.78 a week.

Life pensions were awarded in nine cases of serious and permanent injuries. There were sixteen such injuries in 1920. Injuries that caused time loss of over seven days numbered 32,286.

The Statistical Department's report shows that in 1921 there were 237 permanent eye injuries, 27 arms amputated, 658 fingers lost, 23 legs or feet lost, and 60 toe amputations.

Occupational diseases numbered 576 in 1921, as compared to 596 in 1920.

Compensation and Medical Costs

California's 125,529 injured workers (including the dependents of the 550 killed) received compensation to the amount of \$5,924,582. The medical, surgical, and hospital payments totaled \$2,496,176. The two combined give a grand total of \$8,420,758.

Self-Insurance

During the fiscal year ending June 30, 1922, twenty-six employers in California received certificates of consent to self-insure. A total of 263 certificates have been issued since January 1, 1918, the date on which this requirement of security became effective. Employers, to the number of fifty-two, requested revocation of their certificates during the year, thus leaving 211 in operation at the close of the fiscal year. Approximately 195,143 employees are protected under this plan, and the State Treasurer has received surety bonds or collaterals to the amount of \$3,652,000 to provide security.

Compensation Department

There was a decrease of thirty-two contested claims during the fiscal year, as compared to the previous year, but 2277 disputes were decided as against 2056 reported in the last Annual Report. Compensation was awarded in 1260 of the 2277 con-

tests, 651 were denied, 261 were dismissed, and 105 were settled. The main questions of controversy were extent and duration of disability (548 cases), whether disability was result of injury (308 cases), whether injury was in course of employment (257 cases), extent of permanent disability (205 cases), hernia (200 cases). The record shows denial of 63 per cent of the hernia claims.

Medical Department

The members of the Commission's medical staff made 1299 general physical examinations during the year, 810 in San Francisco and 489 in Los Angeles. Special medical examinations were requested by 320 insurance companies and 115 employers, and 193 were made in behalf of the Commission. Opinions to the number of 1020 were given and 507 bills approved. The gradual growth of understanding on the part of the medical profession is referred to in an appreciative way and the cordial co-operation now existing is praised. While it is recognized, a fee schedule is not the most satisfactory method of adjusting charges, yet no better plan has been devised. Physio-therapy and work are emphasized as necessary in the proper care of many cases of injury.

State Compensation Insurance Fund

The total net premium writings of the State fund for 1921 were \$5,004,880.67. The total premiums of all carriers (thirty-six in number) for the same year were \$13,554,107.02. The State fund's percentage of the total is 36.9 per cent.

Two new branch offices were opened in 1921, one in Stockton and the other in San Jose, thus providing seven branches in California, beside the main office in San Francisco.

The plan adopted for the distribution of dividend savings is operating admirably. Under policies issued in 1921, the table provides an average dividend of 30 per cent.

The State fund has a net surplus over and above all possible liabilities which would enable it to meet any possible call upon its resources due to catastrophes.

On June 30, 1922, the State fund's total admitted assets were \$5,546,773.01, its liabilities (including reserves) \$4,049,802.63, and its surplus \$1,496,170.38.

The Doctor Sofie A. Nordhoff-Jung Cancer Research Prize—Dr. Sofie A. Nordhoff-Jung of Washington, District of Columbia, United States of America, has founded an annual prize of \$500 bearing the title of "The Sofie A. Nordhoff-Jung Cancer Research Prize." This prize is destined for the encouragement of researches in the etiology, prevention, and treatment of cancer. It will be awarded by a commission, composed of members of the University of Munich, Bavaria, and be granted for the first time in December in the year 1923. The commission consists of professors Borst, Doederlein and Sauerbruch, with Professor von Romberg as chairman. This body is empowered to elect successors. The award will be made as a recognition of the most conspicuous work in the world literature bearing on cancer research, done at a time antecedent to the allotment of the award. Though the prize will not be awarded on a competitive basis, the commission invites all research workers in cancer to submit literature on this subject.

New Improved Urethral Irrigator—George L. Eaton, M.D., of San Francisco, Cal., has devised and the Travers Surgical Company are marketing a urethral irrigator made of metal. It can be sterilized by boiling; the flow of solution can be regulated on the handle, or cutoff completely. The shield is constructed so as to prevent any splashing of solution on the patient, and the irrigator can be handled conveniently by the patient.

ANNUAL REPORT, 1922, BOARD OF MEDICAL EXAMINERS

The 1922 annual report of the Board of Medical Examiners, filed with the Governor, shows a very active year just closed, as outlined in the following digest of the various topics discussed in said report.

The November, 1922, election, creating a chiropractic and osteopathic board, promises to materially diminish the work of the investigation and legal departments of the Board of Medical Examiners, as according to the 1921 report and reflected in the 1922 report, approximately 70 per cent of actions for violation of the law were taken against those who held themselves out as chiropractors.

The osteopathic initiative promises to take from the jurisdiction of the Board of Medical Examiners approximately 924 graduates of osteopathic schools. It is estimated that these two initiatives will result in the annual loss of revenue as follows:

(a) From the osteopathic initiative (application fees and taxes), \$5123.

(b) From the chiropractic initiative, revenue from fines, \$4141.50.

No doubt the creation of these two boards will cause endless confusion on the part of those who desire to ascertain whether or not a specific individual is the holder of a license entitling him to practice any system of the healing art in the State of California. The chiropractic and osteopathic initiatives provided for the publication of a directory by each board, hence, hereafter, it will be necessary to investigate the records of all three boards in order to ascertain whether or not an individual is licensed in this State.

The personnel of the board was changed during the past year by the resignation of Louis C. Chandler, D. O., Los Angeles, who was succeeded by Walter V. Brem, M. D., Los Angeles, appointed December 18, 1922.

Associate Counsel C. D. Ballard of Los Angeles resigned and was succeeded by Mr. Leo M. Rosecrans of Los Angeles, effective December 15, 1922.

Applications in the number of 831 were filed during the year, and 646 certificates were issued.

It is interesting to note that the examination records show that no graduate of the University of California Medical School, Stanford Medical School, or the College of Medical Evangelists failed to pass the written examination, thus putting these three schools in the 100 per cent class, a record that the University of California has maintained for the past thirteen years.

Approximately twenty-six graduates of chiropractic schools successfully passed the written examination and were licensed as drugless practitioners.

A survey of the reciprocity activities show that 454 individuals licensed in other states have been afforded recognition of their credentials and granted reciprocity licenses to practice in California. The continued influx from other states shows that an ever increasing number of Eastern residents are availing themselves of the opportunity of enjoying our California climate. On the other hand, only thirty-one of those licensed by written examination in California have sought a residence in other states.

The report of the legal department shows that twenty-six licentiates were called before the board during the past year to answer charges, to show cause why their licenses should not be revoked, preferred, as follows:

Narcotic complaints, 14; abortion charges, 4; penitentiary commitment, 2; superior court convictions, 2; miscellaneous complaints, 4.

Of this number six suffered the revocation of their certificates, three had their certificates suspended, while five, after having been found guilty of the charges, were placed on probation. In addition thereto four individuals had their certificates to practice in California restored to them.

The report of investigations and prosecutions, northern district, shows 157 actions, while that of the southern district shows 232 actions, making a total of 398 actions during the year against those charged with violation of the medical practice act. Of this number twenty-

five were convicted in the north and seventy-seven in the southern part of the State.

The records of deceased for the past five years show that an average of 138 licentiates passed to the Great Beyond each year. The year 1922 is the only year that reached the maximum death rate, when 138 licentiates died and in addition thereto thirty-six doctors of medicine (not licensed) are reported to have died in the State of California.

The report of receipts and expenditures shows the finances of the board to be in a healthy condition.

The annual report will be printed in the 1923 directory published by the Board of Medical Examiners, which it is expected will be ready for distribution some time the latter part of May.

NEW MEMBERS

F. D. Arthur, F. A. Butler, Edgar J. Farrow, E. F. Hoover, W. M. Thomas, San Diego.

Elizabeth Emerson, Santa Rosa.

T. R. Trick, Los Banos.

Luzerne B. Barnes, Newcastle.

Philip H. Arnott, George W. Cox, Harry R. Oliver, Margaret J. Wilson, Rea E. Ashley, Bertrand S. Frohman, Vincent de P. Brown, Howard H. Johnson, Victor Finsand, Hubert R. Arnold, R. Cadwallader, Thomas S. Burns, Leonard R. Thompson, Hans Von Geldern, Harry C. Coe, San Francisco.

A. A. Bird, Boles A. Rosenthal, Nolton N. Ashley, Oakland.

A. Metzner, Harry F. Becker, A. J. Rosanoff, Los Angeles.

DEATHS

Gwaltney, Sylvester. Died at Los Angeles, January 2, 1923, age 59. Graduate of Marion-Sims College of Medicine, St. Louis. Doctor Gwaltney has been in practice in Los Angeles for more than a quarter of a century. He was a member of the Los Angeles County Medical Society, the State Medical Society, and the American Medical Association.

Purkitt, Theodora. Died at Willows, February 8, 1923, age 67. Graduate of Cooper Medical College, San Francisco in 1894. Doctor Purkitt was one of the first women physicians in the Sacramento Valley, having practiced medicine continuously up to a year ago. She was a member of Glenn County Medical Society, the State Medical Society, and the American Medical Association.

Rooney, Henry Thomas. Died at San Francisco, January, 1923, age 47. Graduate of Cooper Medical College, San Francisco, 1902, and licensed in California in 1903. He was a member of the San Francisco County Medical Society, the State Medical Society, and the American Medical Association.

Tucker, Elijah Jones. Died at Oroville, January 30, 1923, age 73. Graduate of National University of Arts and Sciences Medical Department, St. Louis, 1882. Licensed in California, 1891. He was a member of the American Medical Association.

Williams, J. Marvin. Died at Los Angeles, February 4, 1923. Graduate of the Wisconsin College of Physicians and Surgeons, Milwaukee, and licensed in California in 1914. He was a member of the American Medical Association.

California State Journal of Medicine

OWNED AND PUBLISHED MONTHLY BY THE MEDICAL SOCIETY OF THE STATE OF CALIFORNIA

BALBOA BUILDING, SECOND AND MARKET STREETS, SAN FRANCISCO

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VOL. XXI

APRIL, 1923

No. 4

ORIGINAL ARTICLES

RESPONSIBILITY FOR STATEMENTS AND CONCLUSIONS IN ORIGINAL ARTICLES

The author of an article appearing in the JOURNAL is entirely responsible for all statements and conclusions. These may or may not be in harmony with the views of the editorial staff. Furthermore, authors are largely responsible for the language and method of presenting their subjects. All manuscripts will be carefully read, but editorial privileges will be exercised only to a very limited extent. It is believed that the manner of presentation of any subject by any author determines to no small degree the value of his conclusions. Therefore, both the author and the reader, in our opinion, are entitled to have the subject as presented by the author as little disturbed as possible by the editors. However, the right to reduce or reject any article is always reserved.

ETIOLOGY AND TREATMENT OF FAULTY BODY MECHANICS IN CHILDHOOD*

By JOHN C. WILSON, M.D., Los Angeles, California

In the absence of new facts, one's purpose in presenting a subject should be the tabulation of accurate clinical observations, together with a discussion of their practical application. The mechanical factors governing improper attitude are rather definitely described, and it is only their relationship to metabolism that opens new lines of discussion.

TYPES

Individuals are easily classified into three distinct types, depending upon the body structure, and have been so considered by Treaves and Bean after their anthropological investigations. Of the various classifications perhaps that of Bean is the most satisfactory, in which he speaks of the heavy type as the hypo-ontomorph; the thin individual, lighter in weight than the preceding, as the hyper-ontomorph; and the mean or neutral as the meso-ontomorph, this last being the normal type. Further studies, especially those of Brown and Cook, would lead us to believe that the line of demarcation between the normal and abnormal type is rather too closely drawn in this form of classification; for certain mild variations into the class of hypo-ontomorphs and hyper-ontomorphs, because of

their frequency and the normal function of the individuals, must still be classed as normal. However, the term "normal" should be differentiated from the phrase "mechanically perfect."

The anatomical findings are fairly constant for each particular type. The hypo-ontomorph has the forward head and shoulders, somewhat flattened chest, large heavy abdomen, and body well covered with a thick layer of superficial fat. The whole picture is of a heavy and, as emphasized by Goldthwaite, herbivorous individual.

The hyper-ontomorph is undernourished, the head and shoulders are forward, the chest is appreciably flattened, the epigastric angle acute, the intercostal spaces narrow, the scapulae flaring, the normal lumbar lordosis exaggerated, the normal dorsal curve increased and the abdominal wall relaxed. This individual is well described as the carnivorous type.

Data concerning the pathological findings as revealed by autopsy, is rather meager. Bryant, as quoted by Osgood, stated that three hundred autopsy records show that the hyper-ontomorph or carnivorous type is associated in a large percentage of the cases with abnormal intestinal adhesions. Bean, also quoted by the same writer, observed a thousand and two patients with three hundred and seventeen autopsies which showed the stomach small and low, "J" shaped, and far to the left; the liver, small, low, vertical and far to the right. The small intestines were short and of small caliber, the colon was long with a low hepatic and a high splenic flexure, while the transverse portion was a low-hanging loop with a long mesentery. Just what the meaning of such changes may be, if we may consider them pathological, is open to considerable discussion. The advent of the X-ray has changed somewhat our conceptions concerning the position of the stomach, small intestine, and colon. However, it does seem reasonable to believe that an elongated mesentery would be detrimental to the transmission of impulses along the sympathetic trunks, which our physiologists tell us play an important part in digestion.

We know that stretching of peripheral nerve trunks inhibits the conduction of motor impulses. The same principle should be applied to the trunks of the sympathetic nerves which pass through an abnormally elongated mesentery. The flattening of the chest with a diminution in intrathoracic space must mechanically interfere with proper oxygenation of the blood stream. We know that the hyper-ontomorph is more susceptible to disease,

* Read before the Annual Meeting of the Medical Society of the State of California, May, 1922.

particularly to tuberculosis. Improper aeration of the blood stream and the improper aeration of the local organs themselves, must of necessity produce a *locus minorus resistentii*, which is in its beginning fundamentally mechanical in origin.

The question of nutrition is an important factor which is not considered except in a brief manner because there can be no discussion concerning the changes which follow loss of muscle tone due, primarily, to inanition. However, the mechanical changes in the body form following such a condition, should be commented upon at length because of the vicious circle which is established if mechanical measures are not employed to relieve these changes in attitude which so interfere with the recovery of the child.

After a poorly nourished child has maintained a position of faulty attitude for a considerable period of time, the disturbances in muscle balance become fixed, due to weakening of the over-stretched muscle groups and contractures of their antagonists. This situation applies just as truly to improper body mechanics as it does to contractures of the posterior calf groups when bedclothes have been allowed to maintain a foot in a position of plantar flexion. The forward position of the head results in relaxation of the posterior neck muscles and shortening of the anterior groups. In the same manner flattening of the chest and narrowing of the intercostal spaces allow contractures of the intercostal and triangularis sterni muscles to develop. The pectoral groups are definitely shortened when the shoulders are forward, while, in turn, the serratus anterior muscle, which holds the scapula in apposition with the chest wall, is relaxed. The muscles of the abdominal wall become atonic, the erector spinae loses its tone because of overstretching, the tibial groups become overstretching and often the peroneal groups are shortened, giving rise to foot pronation. This, in a brief way, pictures a truly orthopaedic problem.

Improvement in nutrition will have little effect upon improper attitude. No matter how much improvement there may be in muscle tone, the mechanical conditions remain fixed unless mechanical measures are utilized to overcome the muscular contractures and improve the atonic groups. If this condition of improper attitude is allowed to persist, we may have a postural scoliosis transformed into a structural one. The flattening of the chest and the narrowing of the epigastric angle become permanent. These fixed bony changes are, of course, the most difficult to deal with and often are not benefited by corrective measures.

CLINICAL MANIFESTATIONS

Talbot and Brown have discussed the relationship of faulty attitude to chronic constipation, cyclic vomiting and the disturbances in the digestion of fat which are associated with these conditions. Cases of obscure abdominal pain resembling appendicitis, which were relieved by correction of faulty attitude, are also cited.

In the seventeen cases that were studied in the preparation of this paper there were no instances of cyclic vomiting, obstinate chronic constipation

or obscure abdominal pain. These children were referred to the posture clinic of the Children's Hospital for the correction of faulty body mechanics, because of fatigue and because they could not be made to gain in weight. Three of these cases complained of severe frontal headache, which could not be accounted for. These children were under observation for an average of 45.7 days each. Fifteen were under weight from twelve and a quarter to seven-eighths of a pound; while one was three pounds, and another four and one-half pounds overweight. In the beginning these children were given individual attention in the posture clinic with stretching of contracted muscles as the primary objective. They reported three times a week for instruction, and were weighed weekly. Sixteen of these patients gained steadily, while one continued to lose weight. The average gain per day of normal children with ages and heights corresponding to the group studied, was found to be .23 of an ounce, while the average gain per day for this group of children was brought up to 1.07 ounces per day. However, it does not seem justifiable to attribute this rapid gain entirely to improvement in body mechanics, because the routine management of these cases requires, in addition to their postural exercises, a thirty-minute rest period each day.

TREATMENT

Before attempting to correct faulty attitude, it is well to consider briefly the normal body mechanics.

In the first place, the head should be erect so that a vertical plane passing through the ear would pass through the point of the shoulder and the trochanter major. It is surprising to see the difficulty with which children attempt to stand correctly. When a child is instructed to assume a proper attitude, the shoulders are invariably thrown back in an abnormal position; the lumbar lordosis is increased and the whole attitude becomes one of imperfect mechanical poise. Assuming a normal attitude is, in reality, such a simple matter that it may be explained in one short sentence: Hold the head erect and draw the abdomen in. If this is done the shoulders, by gravity, assume a correct position, the antero-posterior diameter of the thorax is increased, and the individual assumes a position mechanically perfect. A certain amount of rotation of the pelvis posteriorly follows the abdominal retraction. This, of course, decreases the lumbar lordosis which so frequently is present. These two maneuvers, particularly pelvic rotation, are often difficult to attain and may require considerable practice in the recumbent position before they can be accomplished while the individual is erect. Since they form the basis of proper attitude, they are so important that sufficient attention should be devoted to them to enable the individual to accomplish them without great voluntary effort.

Concerning the group of cases which present themselves for treatment with faulty attitude of long duration, a question of muscle training must be considered. The presence of fixed soft-tissue

deformities has been considered, and these must be relieved by proper mechanical stretching as the first step in the rectification of this faulty picture. Contracted pectoral muscles will not allow replacement of the shoulders, and passive stretching should be employed until these shoulders may be easily replaced. This same condition applies to the shortening of all other muscle groups. As the contractures have been overcome, the problem of increasing tone in the relaxed muscle groups should be attacked and managed in the same way that a weakened muscle group would be treated after infantile paralysis. This phase of the treatment of faulty attitude requires an endless amount of patience on the part of the child, the parents, the physiotherapist who is actively working with the child, and the medical director. Results cannot be attained in days, and it means perseverance for weeks and months.

Proper hygienic surroundings, adequate food of a nutritious character and regulation of the rest periods, are of great importance in the management of cases with faulty attitude that are physically below par. It is needless to say that mechanical obstructions in respiratory passages should be removed; also, errors in vision must be rectified before permanent correction of a forward head and round shoulders can be maintained, for a child who finds it necessary to bury his face in a book in order to read, is placed in a position of unfair mechanical disadvantage. These errors in vision cause an involuntary stooping forward which has a decided effect upon the normal muscle balance of the head and shoulders.

MECHANICAL APPLIANCES

As a general rule the use of mechanical appliances in the treatment of faulty body mechanics, should be discouraged. There are instances, however, where their use is justifiable. In certain cases the contraction is so extreme and the relaxation is so pronounced that these individuals find great difficulty in attaining the proper muscle balance. This is frequently seen in marked atony of the abdominal muscles.

Children from eighteen months to two and one-half years of age are sometimes seen with extreme abdominal relaxation associated with disturbances of nutrition. It is of course a fallacy to expect children of this age to develop active postural exercises and it is believed that a wide abdominal belt which will not increase the lumbar lordosis, is of decided benefit. As soon as they can appreciate the necessity for exercises, these should be begun with an idea of discarding the mechanical appliance at an early date. Certain cases of extreme disturbance of a mechanical function of the body in older children do not respond to corrective measures, apparently because of lack of general muscle tone. A spring back brace is justifiable in such cases, because, as in wrist drop, splinting prevents the overstretching of weakened and relaxed muscles. However, such an appliance is not to be considered as a permanent correction, and the idea must be borne in mind constantly that it is to be discarded and is

only a temporary feature of the management of the case.

Perhaps a discussion of rest periods is not entirely within the realm of the orthopaedic surgeon, but suffice it to say that periods of rest in positions of overcorrection are a necessary part of the treatment and are partly responsible for the gains in weight which these cases of faulty attitude have exhibited.

Those of us who are seeing these children from time to time, are obligated to recognize and correct these cases of improper body attitude. The parents must be re-educated; the majority believe that the child will outgrow these bodily defects. That this is not the case was definitely proved during the recent active military period, when supposedly the physically fit of our country were subject to physical examination. The statistics showing the enormous number of individuals who were mechanically imperfect, certainly do not reflect credit upon our country. Only in recent years have exercises in educational institutions considered in any way the production of a perfect mechanical body. Our exercises have been splendid to develop endurance and tenacity, for which the American is so well known, but we should not lose sight of the fact that the body is a mechanical form and will operate much better if it is allowed to develop along true mechanical lines.

Suction in the Treatment of Laryngeal Diphtheria

—In an effort to avoid intubation, Harry R. Litchfield and Reginald P. Hardman, New York (*Journal A. M. A.*, Feb. 24, 1923), in the past permitted patients to remain dyspneic for hours, sometimes to the point of exhaustion, struggling for air, hoping that they might ultimately expel the membrane, or that the antitoxin might check its rapid formation. At present they employ suction promptly, and as frequently as indicated. The patient is wrapped in a mummy bandage as for intubation, and through a Jackson laryngoscope the membrane and mucus are aspirated by means of a sixteen to eighteen French silk or metal catheter, which is connected to an aspirating bottle, and in turn connected to an ordinary electric suction pump, capable of producing from five to ten inches of vacuum. From May until the last part of December, 1922, 106 patients with laryngeal diphtheria were admitted to the croup service at Willard Parker Hospital. There were twenty-one mild cases which required no treatment. Twelve patients received applicator treatment. Intubation was performed in eighteen cases. Nine patients received suction and intubation. There were forty-six cases in which suction was used exclusively. The total number of deaths was fourteen, a mortality of 13+ per cent. Of the eighteen patients subjected to intubation, eight died with terminal bronchopneumonia. Three of these were moribund on admission; eight have been discharged cured, and two are still in the hospital, and cannot go out without their tubes for any considerable length of time. Two patients who underwent tracheotomy died. Of the nine patients treated by suction and intubation, two died, and the rest recovered. Both patients had bronchopneumonia on admission. The remaining two deaths occurred in the series in which suction was used exclusively. Both these patients had toxic tracheobronchial diphtheria. They were ill about four days before admission; one had, in addition, a pharyngeal involvement. Suction is especially advocated for cases in which there is a low membrane, which cannot be reached by either intubation tube or tracheotomy.

PRE-CANCEROUS AND EARLY CANCEROUS LESIONS OF THE GENITO-URINARY TRACT*

By JAMES R. DILLON, M. D., San Francisco
From the Urological Department, Stanford University
Medical School.

Before we can solve the cancer problem, the public must be educated to appreciate the importance of the earliest symptoms and diagnosis, so as to offer an opportunity for the complete removal. As a result of wide educational propaganda of breast and uterine cancer, women have come to realize the danger of delay and seek a diagnosis and treatment at the earliest onset of symptoms. The cancer problem in male urology pertains to the prostate, bladder, kidneys, testicles, and penis; the other organs being relatively rarely involved. One of the most characteristic symptoms of the first three mentioned above is painless bleeding which often rapidly clears up spontaneously. Physicians must spread the knowledge that blood in the urine is representative of serious trouble and that it does not always exemplify a straining or congestion.

Cancers of the prostate vary in malignancy from a very slow to a very acute type. In the early stage the symptoms do not definitely distinguish it from benign adenoma, but in a man past fifty, complaining of dysuria or pain in his perineum or rectum, and on rectal palpation a firm nodule is found in either lobe, or one or both lobes thickened and infiltrated around the seminal vesicles, malignancy must be suspected. Urinary symptoms may not be developed at this time or possibly very slightly, as difficulty in starting the stream, loss of force, no nocturia or just beginning, and little or no residual urine. Hematuria is a much later symptom. In such cases Young has advised an exploratory perineal prostatectomy, similar to the procedure in breast tumor in women, and in a large series found beginning malignancy in about a third.

Bladder tumors may exist for years without exciting any symptoms or signs. Hemorrhagic urine with no apparent cause, coming with a sudden onset and often with as abrupt end, should start an immediate investigation, preferably during the stage of gross bleeding when it can be determined whether it is vesical or renal, and if renal, the side it is coming from. Pain is seldom present unless complicated by cystitis, or when the growth is near the vesical neck and particularly if malignant. Frequency is due to the accompanying cystitis, except in later stages when the tumor fills the bladder. Geraghty, Braasch, Kretschmer and others report that they now depend more on the gross appearance of the tumor through the cystoscope for its amenability to surgery, and in classifying it as benign or malignant.

Some tumors having the appearance of benign papillomata, on pathological study show all the changes to a papillary carcinoma. For this reason a large percentage of bladder tumors are considered potentially malignant. Malignancy is suggested if there is thickening or necrosis of the papillae, oedema at the base of the tumor, nodules

in the mucosa near the tumor, or induration felt on rectal or vaginal palpation. Braasch and Geraghty describe fulguration and radium being used to test the nature of the tumor; if benign it usually responds quickly to intravesical treatment; if malignant it may not change or may even be stimulated. Kretschmer reported eighty-six consecutive cases of bladder hemorrhage of which fifty-six or nearly 75 per cent were due to bladder tumor, and thirty-two of these were carcinoma.

Malignancy of the kidneys and ureters give no precancerous or early cancerous symptoms, and even death may result without any clinical evidence of renal involvement. Tumors of the kidney parenchyma, of the kidney pelvis, perirenal tumors, cystic formations, and tumors of the ureters may give similar clinical and urological pictures. So long as surgery remains our only hope of cure, the surgical result will depend more upon an accurate diagnosis before metastasis has taken place, than upon any radical surgical technique. When kidney tumor is diagnosed upon the three cardinal symptoms, of hemorrhagic urine, pain, and tumor, it is well past the stage of early diagnosis.

Of the reported cases, hematuria is the onset symptom in about 40 per cent, pain in about 30 per cent and tumor in 20 per cent. Other initial symptoms of less frequency are circulatory disturbances in which toxins are absorbed and may have a vasomotor dilating effect, apparent in a flushed and congested face. A dry cough with a negative chest is suggestive of diaphragmatic irritation or bronchial gland metastasis, and with hematuria should indicate a urological investigation. Loss of weight, cachexia, weakness, swelling of the legs, recent onset of varicocele or hemorrhoids in a man past forty with hematuria may suggest malignancy. Besides blood, urinalysis may reveal gross or microscopic pus secondary to infection or tumor necrosis. Pain may be caused by pressure of a renal tumor on the surrounding nerve trunks or by increased intra-renal tension from urinary obstruction. Identification of the initial signs and symptoms in the very beginning by a complete clinical and urological examination will result in an early diagnosis.

The clinical picture presented by neoplasms of the testicles is very confusing, and though almost any type of tissue may be represented there is some uniformity in the gross appearance and the method of progression which is usually malignant. Some begin early in life and remain either in a dormant condition or grow very slowly. A hematocele or hydrocele may obscure the real underlying trouble. One in seventy-five abnormally retained testes will become malignant. There is some doubt whether trauma does more than call attention to previously unnoticed developments, as these patients often knowingly disregard a painless and enlarged testicle for many months to many years, and present themselves or call attention to the growth because of pain or inconvenience from the increase in its size. Pain is sometimes first noticed by the rupturing of a vein in the tunica vaginalis, or in the abdomen from

* Read before the Section on Urology of the California Medical Association, Yosemite Park, May 16, 1922.

metastases in the pelvic and abdominal lymph glands.

Malignant tumors of the penis are practically all epitheliomata, and involve primarily the glands or mucous surface of a phimotic prepuce. It is stated that venereal warts which are true epithelial outgrowths, are prone to malignant degeneration. Metastases appear first in the inguinal glands.

There have been less than two hundred cases of all benign and malignant tumors of the ureters reported in the literature, and most of these were accidentally found at autopsy. Of those diagnosed, the onset was insidious and painless, the first symptom usually hematuria, later pain and tumor, usually due to a hydronephrosis caused by ureteral obstruction. Metastasis has been found in nearly all cases. Most of the diagnoses have been made by the onset of hemorrhage and ureterograms, and also seeing the protrusion of a neoplasm from the ureteral orifice.

Malignancy of the urethra, seminal vesicles and Cowper's glands are all very rare. As urethral polyps, and posterior urethral changes are more frequently looked for than formerly, we may hear more of early urethral malignancy in the future.

CONCLUSIONS

I. The diagnosis of beginning malignancy depends upon the early appearance of the patient, also upon the recognition by the physician in general practice of clinical data, other than those definitely involving the genito-urinary tract, which indicate an urological examination, as:

1. History of hematuria, or pyuria, though present urinalysis is negative;
2. Pus or blood in the urine, though no clinical symptoms suggest urinary tract involvement;
3. Tumor in the upper lateral abdomen or suprapubic area;
4. X-Ray shadows suggestive of location in the urinary tract;
5. A history of indefinite abdominal pain.

II. In the course of differential diagnosis involving the urinary tract it must be expected that a large number will be negative, but it must be remembered that negative urologic data are often fully as valuable as positive data.

III. The long duration of symptoms before the patient is completely examined is the greatest stumbling block to an early diagnosis of beginning malignancy. We must spread the knowledge of the importance of analyzing early signs and symptoms, not only among the laity, but with the general profession, if we are to hope to get our tumors early.

Why Men Drink—We cannot disguise the fact, however, that men "drink" because they like it, much more than for any good they suppose it does them, beyond such pleasure as it may afford; and this is precisely the point that all arguments fail to reach. Pleasure is the bird in the hand which foolish persons will always choose before the two birds in the bush which are to be rewards of virtue. Intoxication offers to the weak or ill-managed brain a strange pleasing confusion, a kind of Brahma's heaven, "where naught is everything and everything is naught," and where all perplexities at last resolve themselves into the general formula, "it's of no consequence."—Oliver Wendell Holmes.

THE GROUP PRACTICE OF MEDICINE *

By HERBERT A. JOHNSTON, M. D., Anaheim, Cal.
(From the Johnston-Wickett Clinic, Anaheim, Calif.)

Minot has said: "We have enthroned science in the imagination, but we have crowned her with modesty, for she is at once the reality of human power and the personification of human fallibility." These two latter facts are well borne out in medicine, and especially do we find it so when we attempt a study of the modern group, which in many instances demonstrates the power of such an organization and in others displays weakness due to human fallibility. The lofty function of the physician embodies at all times the relief of human suffering and the care of the sick, so that the physician must be trained to think surgically, and the surgeon to think medically in order to best serve these ends. Are not these sufficient reasons for the organizing into groups those who are engaged in relieving human ills, for in what better way can medical knowledge be brought to bear on the diagnosis and treatment of disease than through the group practice of medicine?

The underlying motive of medicine should be service, and whether it be a collective or an individual practice which is being built up, the best foundation upon which an enduring structure can be erected is that of unselfish service. Other considerations should assume secondary importance in the plan of development. Even that of financial reward, probably the most elusive and deceptive of all, must not dominate the minds of those interested if real success would be attained. So many things influence materially the success or failure of the group practice of medicine that only a few will be touched upon here, and, while these are believed to be most important, there may be other phases of this subject that, in individual cases, should command more thorough consideration.

At first glance, viewing it largely in the aggregate, it would seem that the success of a group of physicians and surgeons working together would depend upon the quality of its component members. For what is a group but a new or composite form of general practitioners, constructed on a much larger scale and presenting to the patient a much broader consideration of his case than is possible by the individual practitioner; since a complete knowledge of medicine is beyond the attainment of any single mind, and to master one of its many branches is a gigantic task for even a consistent student.

The carefully constructed group should contain a representative of each of the most important specialties qualified by education, experience and temperament to fill his place in the scientific structure of which he has become an integral part. His capacity for co-operation and harmonious action determines to a great extent his fitness for practicing with others, for no matter what academic heights he may have reached, or what world-renowned medical centers may have been illumined by his presence, or at what Aesculapian shrines he may have knelt, if he is not capable of collaboration and assimilation he is not properly equipped to enter the portals of the group practice

* Read before the Santa Clara County Medical Society, San Jose, December 3, 1922.

of medicine, and would achieve far greater success by practicing alone. And yet, he who joins a group should not lose his individuality to such an extent that he becomes merely a cog in one of the wheels of this delicate mechanism. Individual, independent opinions, the constant matching of wits, and whetting of intellect occasioned by the difficulties met in diagnosis and treatment, serve to promote the health of the group and tend to ward off the presenility so liable to attack the individual if practicing in an isolated manner. The surgeon should be pleased to have all surgical patients examined by the internist, and welcome his valuable advice as to preparatory and post-operative treatment. The internist should find that he is often doing his patients a great service by recommending surgery with an unbiased mind, and thereby elevating his position in medicine.

Both of these will grow to appreciate the work done by the diagnostician, who, by the aid of the exhaustive methods of clinical and laboratory examinations, is able to establish diagnosis upon a better basis than ever before in the history of medicine. The social side of the group must not be forgotten, and friendship and loyalty should be cultivated in this organization where a spirit of helpfulness, unselfishness and harmony is so necessary.

The group should have a head who must be in final authority. He should be associated with the best experts obtainable and let them alone, except in an advisory capacity. A group should be a collection of the best brains of the best men in the profession and, in fact, a clearing house of the latest discoveries in diagnosis and treatment.

Through its service to the other members of the profession in its immediate vicinity, the group has wonderful possibilities. Although the favor in which it is held by outside practitioners is frequently in inverse ratio to their proximity, one can usually find a few right at its doors who gladly avail themselves of the great advantages afforded them and their patients by having the diagnostic aid of well-equipped laboratories and more complete examinations. The reasons for being held in disfavor are not all attributable to jealousy on the part of those not in the group, but may be caused by unfair treatment or lack of proper consideration of the outside practitioner by the group; and yet, it would seem that the group which limits its work to the special branches and leaves for the general practitioner the family practice, and offers him access to its library, the advantages of its laboratories and its opinions, and a welcome to its staff meetings, is endeavoring to deal kindly with its brethren, and deserves a tolerant word rather than the scalpel.

There is probably no more important part of the group's work than diagnosis. Frequently the approach of the patient is accompanied by many misgivings, especially as to the necessity of group study in his individual case. The severity of his symptoms and length of illness influence his attitude toward the ordeal of a modern clinical and laboratory examination, the well-established group seeing, of course, many chronic and fewer acute cases. Intensive group study applies more particu-

larly to the chronic cases, and it is here that it is of greatest value to the physician and his patient. Rare talent is required in the diagnostician in order that he may guide his patient so that he will undergo an examination commensurate with the needs of his case, and yet not impose upon him unnecessary annoyance from discomfort, pain or expense. He should have such a keen insight into human nature that he will be able to distinguish the real from the unreal, that which the patient thinks or hopes may be for what really is, and give the actual facts their proper consideration in the final summing up of that complex of symptoms and pathology into what we call a diagnosis. In the desire to find all existing pathology he may easily forget the patient's viewpoint, which from long years of precedent tends toward individualism in the selection of medical help. To be sent from physician to physician in order to be properly examined is distasteful to many, even though they recognize the possible advantage that might accrue.

The unpleasantness surrounding a gastro-intestinal diagnostic survey, the procuring of fluids for serological and other laboratory examinations, the metabolic, cardiographic, pyelographic and other experiences, too numerous to mention, have a tendency to develop timidity in patients and their friends. How readily some of them prefer to accept the guesswork of the cultist, whose only requirement of them is permission to feel their spine, face them to the west, hold their hands in his, or speak soothing words to their troubled souls.

The group should be careful to maintain more of a personal touch with its patients. The criticism that it presents a cold exterior and handles patients in too much of a departmental manner is not entirely without foundation, and can be remedied by the development of a warm personal interest, which is most gratifying to those who are sick. This will materially increase its popularity and its power and tend to decrease its fallibility, for the patient will more readily withstand the necessary annoyances incident to a thorough investigation of his case. If the first one to greet the patient is an individual of pleasing personality, optimistic and cordial, and capable of displaying a genuine interest in him, much will be accomplished toward obtaining his confidence and cooperation.

In its relation to the community which it serves, the group should be of great value. By taking a definite stand in favor of all measures which protect the public health, its influence will be of great benefit to the people. The furtherance of charities of a public nature which have to do with the physical improvement of certain classes, such as crippled or defective children, or working through infant welfare societies and clinics, would seem to be legitimate activities. Just as in individual practice, the poor must have the best the group can give, and anything short of this will lower the ideals of the staff and tend to develop commercialism. Honesty of purpose in a desire to give the patient the best possible in diagnosis and treatment will produce its reaction in the laity, who will not be slow to recognize the fact that medicine is becoming more and more an exact science. As the public becomes

better acquainted with the methods, aims and benefits of collective practice more groups will be formed, and although the most successful ones so far have been the outgrowth of some one or two physicians' large general practice, some better method may yet be evolved which will provide for each community the necessary men, equipment and organization. The future of properly organized group medicine looks good, and physicians commanding large practices owe it to their communities to provide them with its benefits by adding unto themselves carefully selected specialists in the different branches as they are able, ultimately developing competent groups.

DIPHThERITIC OTITIS MEDIA *

By WILLIAM J. MELLINGER, M. D.,
Santa Barbara, Calif.

There are very few records of primary diphtheritic otitis media. A search of the literature back to the year 1860 has revealed reports of only eleven fully authenticated cases which were undoubtedly primary diphtheric infections of the middle-ear. Politzer in his text-book states that Burckhardt-Merian has "clinically observed" one case, but gives neither dates nor details. Krepusko of Budapest reported one case in 1897; Kobrack, one case in 1904; Daae of Norway added a third two years later (1906); in 1908 Stein of Germany recorded three cases, and these were followed by two American reports—Haskin (1914) and Bane (1917). The Japanese Shoji added another in 1918, and the year following (1919) Pognat, a Frenchman, reported two, making eleven authentic reports up to the present time, so far as I have been able to discover. As many as fifty-three reports are to be found in our medical literature, but practically all of these are open to question. The standard text-books of otology either altogether ignore the possibility of such an occurrence, or content themselves by saying that it is "very rare."

Even in the cases which seem unquestionably authenticated, there is no record of the virulence of the infecting organism having been demonstrated by animal inoculation. Inasmuch as there is no definite symptomatology for this type of infection, by which undoubted clinical differentiation can be made, and careful bacteriological study of middle-ear infections has not been routinely done, it is probable that while a virulent primary diphtheria of the middle-ear is very uncommon, it is also frequently overlooked.

In the extensive study of diphtheria made by Guthrie, Marshal and Moss, non-virulent diphtheria bacilli were frequently found in the throats of healthy individuals, and this would lead one to believe that inflammation of the middle-ear might often be due to infection with the same organism. During the last two years I have had eleven instances of this kind, but in the same length of time have seen but one primary infection of the middle-ear for which virulent diphtheria bacilli were responsible.

There is apparently no statement anywhere in the literature regarding infection of the middle-ear with non-virulent diphtheria bacilli. In the reported instance of aural diphtheria, it is assumed by the writer that virulent Klebs-Loeffler bacilli were present, but in only three cases—those of Pognat and of Shoji—was the virulence tested by animal inoculation. Since animal inoculation is the positive proof of virulence, it may be that many of the infections reported in American literature were due to non-virulent organisms.

In the course of routine cultures of all middle-ear infections coming under my care, the Klebs-Loeffler bacillus was twelve times isolated in pure culture. In each instance the findings were verified by repeated cultivation, and cultures from the nose and throat were negative for the same organisms, though once a positive culture was obtained from pus which was expressed from between the gums and the teeth.

As a predisposing cause of diphtheritic infection of the middle-ear, six of the twelve patients gave a history of having had a purulent discharge from the ear, during or immediately following an attack of influenza. The essential factors in the histories of the remaining six were frequent colds and mouth-breathing. In no case was there a history of exposure to diphtheria.

Eleven of these patients were children whose ages varied from five months to twelve years; one only was an adult, fifty-eight years old.

According to Pognat (Rev. Laryngol. d'Otol. et de Rhinol. 40:377, August 15, 1919), primary diphtheritic otitis media is characterized by three associated symptoms—intense and persistent pain, pronounced bulging of the tympanum, and a sero-hemorrhagic discharge, sometimes containing grayish-white detritus. None of these manifestations are peculiar to this condition, but it is their association which Pognat regards as significant. When all three are in evidence simultaneously in an otherwise unexplainable otitis, he advises resort to bacteriologic examination. This particular symptom complex is not stressed by any other authors, however, and did not appear in my personal cases.

In each instance the patient appeared at the dispensary or office complaining of a discharging ear, the appearance of the discharge having been preceded by some pain. Physical examination revealed no other findings besides hypertrophied tonsils and increased amount of adenoid tissue. In only two cases was the infection bilateral, and but two of the patients developed tenderness over the mastoid. This tenderness subsided within four days.

In order to determine the virulence of the organism $\frac{1}{2}$ cc. of a viable culture suspended in normal salt solution was injected into the subcutaneous tissue of a guinea pig. In the event of the organisms being virulent Klebs-Loeffler bacilli, the death of the guinea pig occurs within four days. Post-mortem examination reveals certain characteristic changes, among which are edema of the subcutaneous tissues, and free fluid in the peritoneal cavity. The organism can also be obtained from the guinea pig, in pure culture.

The treatment of the patients suffering from

* Read before the Medical Society, State of California, at the Annual Meeting, Yosemite Park, May 16, 1922.

non-virulent Klebs-Loeffler bacillus-infection of the middle-ear consisted of frequent instillations of 60 per cent alcohol into the external auditory canal. Although the nasal cultures were negative for these bacilli, a few drops of 25 per cent argyrol were placed in the nostril on the affected side. The head was held in a position which would permit the argyrol to run backward over the eustachian tube. In every instance the discharge entirely ceased within a period varying from seven to twenty-one days.

The history of one case is of especial interest. The patient, who had a bilateral diphtheritic infection of the middle-ear, was admitted to the hospital, given 3000 units of antitoxin, and then transferred to the isolation ward, where there were no other diphtheria patients. The laboratory subsequently reported a non-virulent Klebs-Loeffler bacillus infection of both ears; nose and throat cultures being negative. Sixteen days later this patient developed a positive infection of the nose and throat. The middle-ear infection had in the meantime been overcome, and negative cultures had been obtained. The nose and throat cultures, however, remained positive for twenty-one days. This history seemed to demonstrate that the infection of the middle-ears with a non-virulent Klebs-Loeffler bacillus did not give an immunity toward a virulent Klebs-Loeffler bacillus. Furthermore, 3000 units of diphtheria antitoxin were not sufficient to confer immunity. As a result of this experience, we have isolated our patients with non-virulent middle-ear infections, and have not allowed them to come in contact with those suffering from other forms of diphtheria.

The one instance in this series of a virulent Klebs-Loeffler infection of the middle-ear occurred in a white child, three years of age. There was a history of twelve attacks of earache followed by a discharge from both ears, lasting from a few days to three weeks. Following the last attack the discharge persisted for four months. The child was a mouth-breather, the tonsils were very large and the anterior pillars deeply injected, although the surface of the tonsils was clean. The canal of the right ear was dry, although there were several scars near the center of the drum. Cultures from this ear revealed a few colonies of staphylococcus albus and many colonies of bipolar bodies having the cultural and staining characteristics of the Klebs-Loeffler bacillus. Cultures from the nose and throat were negative. Klebs-Loeffler bacilli were isolated in pure culture, showing a marked acid reaction in glucose bouillon. One-half cubic centimeter of this culture suspended in salt solution was injected into the subcutaneous tissue of a guinea pig. Death occurred in thirty hours. There was marked edema of the subcutaneous tissue and an abundance of fluid in the peritoneal cavity; and a marked hyperemia of the supra-renal capsules. The bipolar rods were recovered from the edematous subcutaneous tissue, and a second guinea pig was inoculated, with a suspension of the recovered organisms. The animal died in

forty-eight hours, and the autopsy findings were similar to those of the first guinea pig.

Since this patient was a mouth-breather of an extreme type, adeno-tonsillectomy was advised, and immediately done. The injection of the antitoxin was not permitted by the parents. Local treatment consisted in filling the external auditory canal with 60 per cent alcohol, which was allowed to remain twenty minutes. This was done four times each day. Argyrol was instilled into the nose as heretofore described. Within twenty-one days the discharge had ceased, the perforation in the drum had closed, and negative cultures were obtained. Four weeks later a slight rhinitis developed, and the discharge from the left ear reappeared. Cultures from the ear now gave a pure growth of a Klebs-Loeffler bacillus. Under treatment the discharge subsided in seven days, and there has been no further trouble since October 5, 1920.

CONCLUSIONS

1. Infection of the middle-ear with virulent Klebs-Loeffler bacilli has very seldom been recorded in the literature.
2. Although there is very little in the literature concerning it, infection of the middle-ear with non-virulent diphtheria bacilli is undoubtedly of frequent occurrence and would be recognized if cultures were routinely made in all cases of middle-ear infection.
3. There is nothing peculiarly characteristic in the symptomatology of middle-ear infection with either virulent or non-virulent Klebs-Loeffler bacilli.
4. Virulence is best determined by animal inoculations.
5. Eleven instances of non-virulent infection of the middle-ear and one of virulent infection are considered in this report, in all of which prompt recovery followed appropriate treatment.

(San Marcos Building.)

The Iowa Plan—In discussing this subject, F. E. Sampson, M. D., and Tom B. Throckmorton, M. D., stated that "in sixty-seven of the ninety-nine counties of our State, the number of churches exceeded the number of hospital beds. A study of ten counties in which there was not so much as one hospital bed revealed an average of forty-one churches, of twelve different denominations. In these counties, 60 per cent of the churches were systematically 'farmed' for the building and maintenance of denominational hospitals in distant cities and for mission hospitals in foreign lands.

In these communities, we found various fraternal and benevolent orders likewise contributing to the establishment and maintenance of hospitals, homes, etc., none of which were located within practicable working distance of the contributors, and to the utter neglect of needed hospital facilities in their own communities. . . .

In every one of the ninety-nine counties were found activities aiming at health conservation, initiated and sustained by lay organizations, such as the health crusade work in public and parochial schools and other activities carried on by the State tuberculosis association and its county units."—American Medical Association Bulletin, February 15, 1923.

INTERMEDIATE CERVICAL REPAIR FOLLOWING CONFINEMENT *

By TITIAN COFFEY, M. D., Los Angeles, Calif.

Causative Factors of Cervical Laceration—Most important of all, probably, is malposition of the presenting part, such as face, brow and breech presentations; early rupture of the membranes, especially in small pelvis, the prolonged stretching and pressure from the presenting part causes the cervix to become thick and edematous; sudden and forcible expulsion of the presenting part through the cervix, as noted with tremendous pain, sometimes accompanying the latter part of the second stage; also after the use of pituitrin; artificial dilatation of the cervix, either manually, instrumentally or by the use of bags; the use of forceps, either improperly applied, used as rotators, or where the head is forcibly pulled through the partially dilated cervix; intrauterine manipulations, as when performing versions; rigid os; cicatricial induration and cystic or malignant diseases of the cervix rendering the tissue friable and soft.

Diagnostic Points in Cervical Hemorrhage—The diagnostic point of cervical hemorrhage is active bleeding following the birth of the child and the placenta, with the uterus firm, well contracted and low in the pelvis, as it should be immediately following birth. If, on the other hand, the uterus is soft and boggy, and shows sluggishness in contracting, we may feel very certain we have to deal with uterine inertia and uterine hemorrhage. The control of this hemorrhage, unless the cervical artery has been torn, or the laceration has extended high into the broad ligament, is usually easy. Brisk massage of the uterus will bring the desired result. In cervical hemorrhage, however, we have a firmly contracted uterus with the bleeding continual. This shows we have to deal with a severe laceration of the cervix.

Character of Cervical Laceration—The nature of the laceration varies with the severity of the labor and the amount of damage done the tissues. By far the most common variety is the ordinary bilateral tear extending on either side, anywhere from a slight gaping to a half or an inch, or to a complete laceration involving the cervical and vaginal junction.

The unilateral tear is the most common, and I have come to expect it in posterior positions of the head, and in cases of deep transverse arrest, where labor is prolonged, or where forceps are applied and the head grinds around the lateral pelvic wall three-eighths of a circle. In these cases the cervix is frequently under tremendous pressure and usually is not well drawn up over the head, the edges being easily palpable to the examining finger; therefore, it is liable to injury from pressure, or is torn by the forceps. The stellate tears are more apt to occur in cases of rigid os, in instrumental dilatation of the cervix, or when using the Bossi dilator, and in difficult forceps operations.

Condition of the Cervix Immediately Following

* Read before the Section on Obstetrics and Gynecology of the Medical Society of California at Yosemite National Park, May 17, 1922.

Birth—The cervix, immediately after birth, presents the appearance of a jelly-like mass, about the consistency of liver, soft, flabby, dark-blue in color, very edematous and overstretched. For this reason I am opposed to the immediate repair of the cervix except in cases where it is necessary to control alarming hemorrhage. The parts are so distorted and bruised at this time, that sutures do not hold, and it is difficult to get the proper approximation and allow for what will be the new external os. By the ninth or tenth day, however, the tissues have so regained their tone that they are easily approximated and repaired.

Condition of Cervix on Ninth Day—When the cervix is exposed on the ninth or tenth day, its size is little larger than normal and the evidences of injury are easily demonstrable. The color is usually healthy in appearance, but occasionally there may be observed small areas or patches of slough and in many, hemorrhagic spots evidenced by areas of blue discoloration. The torn lips are

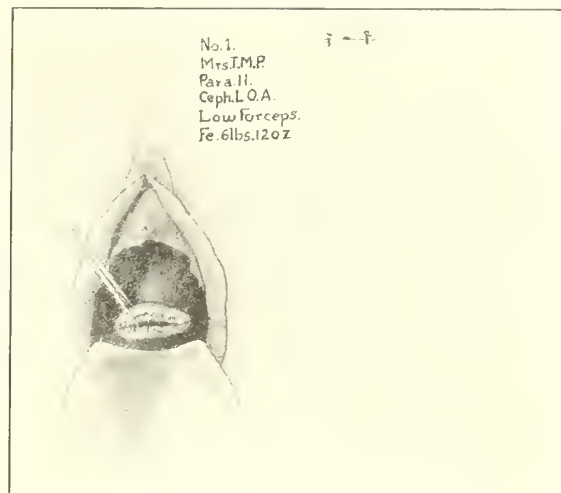


Fig. 1—Cervix ninth day, unrepaired, showing bilateral lacerations and granulations.

covered with a thick glairy tenacious mucus, usually blood-stained. The lacerated surfaces are covered with fresh granulations that bleed freely. In some cases the everted lips present a veritable cauliflower appearance, covered with soft, bright-red, spongy granulations, at times from an eighth to a quarter of an inch in height. Very frequently we find these granulated surfaces thickly studded with hypertrophied cervical glands, causing the tissues to look as if they had been powdered with sage.

Technique of Operation—The technic or repair is as follows: The morning of the operation, usually the ninth or tenth day following delivery, a hypodermic of morphine, gr. 1/6, atropin gr. 1/150 is given one hour before operating, an enema is given early to assure an empty rectum, and the local surgical preparation is made before the patient is brought to the operating-table. No internal manipulation is allowed. The patient is instructed to empty the bladder before coming to the operating room. The patient is placed in the

exaggerated lithotomy position, as it is very important to have the hips well over the edge of the table, thus facilitating the manipulation and making it easier to draw the cervix forward. She is then given a vaginal douche of 1 per cent lysol, washing out all discharge from the vagina. No internal scrubbing is permitted. In cases where perineal sutures have been introduced these are allowed to remain until after the operation, as they act as a support to the structures and prevent damage or tearing out of the newly healed tissue.

A trivalve speculum is then very carefully introduced in a downward, backward direction, following the posterior wall of the vagina in such a way as not to disturb the perineal sutures. After exposure of the cervix, the anterior and posterior lips are seized as near the center as possible, with a single grasp volsellum forceps and drawn into view. The trivalve speculum is then withdrawn, and with equal care, a light weighted speculum introduced. Care should be taken not to make too much traction, as it frequently causes pain, and it is not necessary to drag upon the cervix at all, nor to bring it out of the vagina. The torn lips, after being carefully sponged off, to remove as much of the bloody mucus as possible, are then injected with 10 cc. of 1 per cent apothesine solution, especial care being taken to inject well into the angles of the laceration, for this is the most sensitive point when the sutures are passed. The edges of the anterior and posterior lips on the left side are then trimmed off with curved scissors, care being taken to remove only the granulation tissue and not the cervical tissue. After the edges are freshened in this manner, the surfaces are gone over with a large sharp curet, until one is down to the base structure. The same procedure is done on the opposite side. We now have two clean surfaces ready for approximation. The lips are drawn together with sutures of No. 2 forty-day chromic catgut, starting well at the upper angle to secure perfect coaption. It is important to begin well in the upper angle, for otherwise a sinus is sometimes left at this point that usually is permanent and discharges a considerable amount

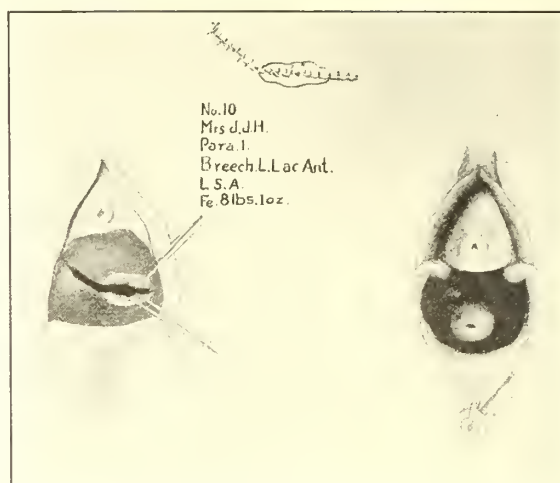


Fig. 3—Left: Severe laceration extending to right vaginal fornix. Upper center: Diagram of repair. Right: Result end of sixth week.

of mucus for a long time. The suture is usually interlocking, and the average case needs about three bites of the needle on either side. Occasionally it is advisable to use the interrupted suture, but this depends upon the nature of the laceration. The sutures are run right down to the tenacula, and after these are removed we have a neatly closed cervix with a new os just large enough to pass a uterine sound. The sound is always passed before the removal of the tenacula, to ascertain the patency of the new canal. The cervix is then pushed far back into the vagina, the perineal sutures are removed, another lysol douche is given, and the operation is complete.

Advantages of the Operation—

1. This repair hastens and insures a normal involution of the uterus and has much to do with preventing a subsequent metritis and endometritis.
2. There is no loss of tissue such as occurs when we repair a greatly hypertrophied cervix filled with scar tissue.
3. It does away with the necessity of the patient

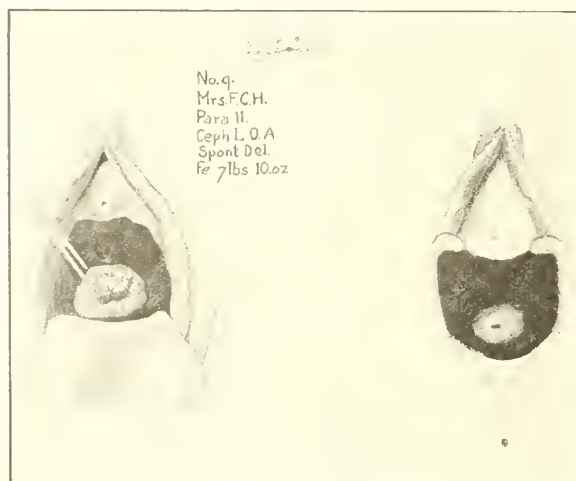


Fig. 2—Left: Excessive granulation of cervical mucosa, ninth day. Right: Result end of sixth week following repair.

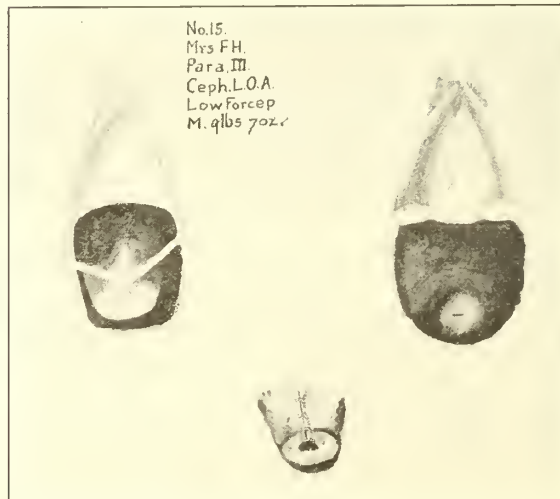


Fig. 4—Peculiar and rarely observed laceration of anterior lip with diagram of repair and end result.

returning to the hospital for future operative work, and certainly must lessen the danger of malignant disease at a later period in life.

4. The approximation and healing is perfect and the scar tissue so trivial that it does not interfere in any way with subsequent dilatation of the cervix at future pregnancies.

5. A general anesthetic is not needed; therefore, the patient is saved this risk.

6. This operation does not interfere with the patient being up and around, nor with her going home at the end of the fourteenth day following confinement.

Result Six Weeks Following Operation—The results are most gratifying, the cervix normal in size and color, no cervical discharge, perfect union by primary intention, and a pinhole os that looks in many cases, as if it were a nulliparous os, and it would be hard in some to tell a woman had ever borne a child.

CONCLUSIONS

1. The end results speak for themselves.

2. The operation is easy and can be done either at home or in the hospital.

3. No general anesthetic is needed except in selected cases.

4. The patient does not have to return to the hospital for future operative work.

5. Involution of the uterus is hastened.

6. Dangers of septic endometritis is lessened, together with lessened danger of Ectopic pregnancy, on account of chronically inflamed tubes, due to chronic metritis and endometritis.

Lastly, a perfectly healed cervix with lessened danger of malignant development in later life.

Two Violators Concerned in Criminal Abortions—

The following editorial in the Sacramento Bee of December 14 will prove interesting to physicians as well as the public in general: "The district attorney of Sacramento County is charged with being remiss in his duty in that his office failed to co-operate with the board of medical examiners in the case of certain individuals charged with performing illegal operations. Whatever may be the merit of this complaint, the accusation brings up again the fact of the startling prevalence of a horrible crime—one in which women by the hundreds are criminal participants; women who would be deeply indignant if anybody imagined they possibly could connive at the death even of a dog. Before God and in the eyes of the law, women who hire others to kill their unborn babes are as guilty as those who commit the hellish deed. And it is a travesty upon justice to put one in jail and never to punish the other."

New Medico-Dental Building for San Francisco—

A Medico-Dental office building in San Francisco, owned by physicians and dentists, seems assured. It will be erected on the northeast corner of Post and Mason streets. Plans for the building are about complete. It will be approximately fifteen stories in height, will have a library, as well as assembly and committee rooms, and will cost over one million dollars.

Since the announcement of the plan to erect the Medico-Dental building, the directors of the corporation have been gratified to receive widespread expressions of the professional men of this city in the project.

RESULTS OF RADIUM IN GYNECOLOGY *

By ALICE F. MAXWELL, M. D., San Francisco
From the Department of Obstetrics and Gynecology,
University of California Medical School

Since the advent of radioactivity into the field of therapeutics, a tremendous amount of literature has accumulated on the subject. In the beginning, just as with most innovations, it was accepted almost universally by the medical profession as a panacea for the cure of neoplastic diseases. This impression, unfortunately, has been strengthened in the minds of the laymen by the publicity gained through magazine and newspaper articles. The inevitable adjustment is at hand, however, and the pendulum is now swinging towards a more conservative and sane evaluation. From the chaotic mass of individual case reports, the field of application of radioactivity is being definitely outlined and clearly defined. We offer the results obtained by radium in the Department of Gynecology at the University of California, with the hope that our contribution may aid in this process of crystallization and serve to place the subject on a more rational basis.

The material for the study consists of 162 cases which have applied to and which have been treated by our Woman's Clinic during the years 1916 to 1921, inclusive. The malignant cases comprise carcinoma of the cervix, uterine body, ovary, clitoris, and urethra. The non-malignant cases include fibromyoma and myomatous polyps and endocervicitis. We also used radium for the control of hemorrhages occurring in the adolescent and premenopausal period not occasioned by tumor growth. Once it was employed to induce the menopause in a woman who developed a psychosis with the onset of each menstrual period. A single case of chorioepithelioma was treated with interesting and instructive results. In addition to this series, we have employed radium in a few instances for the treatment of malignant conditions of the rectum and groin. The results in this group of cases have not been included in our review, since we are concerned in this study only with a purely gynecologic discussion.

Carcinoma of the Cervix—The relative frequency of cancer of the cervix and that of the uterine body is usually stated to be as 20 is to 1. This ratio is not confirmed by our study for, during five years, 108 women with cervical carcinoma and ten with fundal growths applied for treatment. The ages of these cases ranged from twenty-eight to seventy years. Emphasis is usually laid upon the tendency of the cervical carcinoma to develop in women near the menopause, yet it must not be overlooked that the growth may make its appearance at a much earlier period. While the majority of our women were in the fourth or fifth decade, four women under thirty (3.7 per cent of the total) were suffering from advanced growths when first seen. In this connection, Wertheim, in reviewing his first series of five hundred cases, found that 6 per cent of the cancers

* Read before the Section of Obstetrics and Gynecology of the Medical Society of California, at Yosemite National Park, May 17, 1922.

of the cervix occurred in women under thirty years. Twenty-seven per cent (twenty-nine cases) of our women were nullipara, an interesting observation in view of the importance attached usually to the trauma of child birth and to chronic endocervicitis as etiological factors of uterine carcinoma.

It is impossible in a review of this kind to give all the details of the treatment. Briefly stated, our plan has been to use the radium as a salt or emanation in a glass capsule screened by 1 mm. of brass and 1 mm. of silver. The capsule, encased in sterile black rubber tubes, has been inserted into the cervical canal and uterine body to permit as wide an area for raying as is possible. Instrumental dilatation of the cervical canal has usually been avoided for fear of distributing the cancer cells. Additional cross-fire has been obtained by capsules placed in the lower uterine cavity and in the vagina in direct contact with the cervix and parametrium. We have tried bare tubes with small doses and have found them of little use save in vaginal metastasis. Many of our women presented with large sloughing ulcers which we formerly treated by actual cauterization; recently, however, we have abandoned this procedure, realizing that the exuberance of the growth could be utilized as a screen and thus permit of more extensive treatment. Gauze strips and rubber dam have been firmly packed into the vagina, to separate its walls and to protect the rectum and bladder which are emptied by enema and frequent catheterization.

The average doses have ranged from 3000 to 5000 mc. hours given either in a single treatment or, more frequently, by the fractional method, by which a relatively large dose (2000 mc. hours) has been given at the first application and has been repeated after an interval of forty-eight to seventy-two hours. Although comparatively large amounts of the emanations are available, we have usually employed a capsule containing 100 to 150 mc. Additional treatment was occasionally given three to four months later if the symptoms returned and the visible growth had not been checked.

While we are aware of the variations in the histology and the morphology of cervical carcinoma, it has not often been possible to utilize these classifications to group our cases. The vast majority of our patients when first seen presented a stage in which the growth had lost its distinguishing characteristics. Usually, there was only a sloughing ulcer. Moreover, the fact that tumors presenting identical histologic and morphologic features may vary considerably in their clinical manifestations, rate of growth and degree of malignancy adds inevitably to the difficulty of drawing conclusions as to the response of the neoplasm to treatment.

We have divided our material into early or operable cases, borderline and inoperable growths. This division has been based upon: (1) the duration of symptoms; (2) the fixation of the growth and infiltration of the pelvic connective tissues; (3) the presence of metastatic deposits; (4) constitutional reaction. The first factor is dependent

largely upon the intelligence and observation of the woman; the second is influenced by the presence of an infected ulcer with its attendant inflammatory reaction and thickening and fixation of the parametrium. This classification, however, has served as a suitable working basis.

There were 108 women with cervical carcinoma, twenty-three of whom had recurrent growths after some type of hysterectomy or cervical amputation; eighty-five had primary cervical growth. Eighty-two of this latter group received only radium treatment. Three were subsequently operated.

Inoperable Growths (Forty-two Cases)—Over half (51 per cent) of these patients had inoperable growths; many were almost moribund from profuse hemorrhage and cachexia; all showed massive pelvic involvement. We refused no patient in our earlier series, although we appreciated the fact that radium was useless and possibly harmful in some instances. More recently we have refused to treat the moribund cases or the very extensive cases complicated by vaginal fistulae. The fate of two of the forty-two women with advanced growths could not be determined. Thirty women (71 per cent) are dead, the majority (66 per cent) having succumbed within a few months to a year after radiation. Yet four of them lived over a period of two to three years with marked improvement of their general condition, control of the pain, and checking of hemorrhage. One of these cases merits further discussion. This woman of forty-two had a large inoperable fungating cervical mass, which was so altered by radiotherapy that the condition was considered operable. Two months after her last treatment, an attempt was made to remove the growth, but at operation it was found that the involvement was so extensive that a radical removal was impossible. The operation consisted of a simple panhysterectomy; yet this patient is entirely free from evidence of carcinoma nearly four years after operation. This possible cure must be attributed to the radium; she received intensive post-operative raying also. Two women had survived at the time of our report, although none appeared as if they would become five-year cures. Three have been followed over three years. While this group is small, we must admit that radium has had a remarkable palliative effect when 10 per cent of the cases in the terminal stage of the disease have survived over a period of three years and living has been made bearable and comfortable. We wish to lay emphasis on the point that radium helps this class of case, chiefly by cleaning up the ulcer.

Borderline Cases—In the borderline group were thirty-one patients (38 per cent of the series) who gave symptoms of six months to a year's duration. Ulceration of the cervix was present in all. Our records on twenty-four of these women show that over 50 per cent (thirty-one) were alive, some as long as two years after treatment. Three women were so improved as the result of raying that they were subsequently operated.

It is with this type of case that radium has been definitely more satisfactory than has surgery.

While surgery rarely cures more than 10 per cent to 15 per cent of the borderline cases, Bumm has reported a 21 per cent five-year cure by radium in a series of twenty-two cases. We realize the necessity of estimating a cure by radium on a basis identical with that set up by surgical standards; namely, a five-year period of freedom from recurrence. Therefore, we draw no conclusions from our series, but feel that our results from radiotherapy with this type of case have been encouraging.

Operable Cases.—There were only two patients with very early cases of cervical carcinoma in whom surgery was definitely contra-indicated because of cardiac complications. One woman died with an embolus one year following treatment, without gross evidence of cancer. There was no autopsy, so we do not know the actual condition. The other patient shows no evidence of carcinoma after three years. We attempt no conclusions from these cases, and believe that at present operable cases should be treated by radical surgery since the work of Bumm shows that, judged on the basis of five-year cures, surgery in early growths gives better results than radium.

Recurrent Carcinoma.—Recurrent growths have responded less satisfactorily than any other group, possibly because the great majority of these are not recurrences but represent the proliferation of cancerous tissues not removed at time of operation. Fifteen cases (65 per cent) of these twenty-three patients have died, usually within a year following the treatment. One of the five women who are living is clinically well after three and a half years, a result which may be due to a variation in the malignancy of the neoplasm. Three women have been lost from our records.

Radiation After Operation.—Radium has been used prophylactically following radical hysterectomy as popularized by Wertheim. Two of the five women so treated are well after five and six years' observation, respectively. The time interval is too short with the remainder to draw any conclusions. Nor do we claim that radium plus operation was the decisive combination in these two cases. The removal was most extensive in each case.

Carcinoma of the Uterine Body.—We coincide with the opinion that these growths are best treated by surgery, and operate all cases. We have had ten cases with fundal carcinoma. Five are dead (all advanced recurrent growths). Five are living, three as long as four years. All had been operated before radiation. Twice, while doing a panhysterectomy for fundal carcinoma, the uterus was so friable from cancerous invasion that, despite the utmost gentleness, the wall was torn through, with liberation of the neoplasm. Both women received large doses of radium post-operatively and have been followed for four years. One has recurrences.

Carcinoma of the Ovary.—We have treated carcinoma of the ovary in six cases, one of the urethra and two of the clitoris, without good results and without apparent control of the cancer. The results of operation, however, are also extremely poor.

Menorrhagia and Metrorrhagia.—The hemorrhages associated with adolescence, or the fibrosis uteri of the menopause, can be effectively controlled by radium. By grading the doses according to the age of the patient, we have found that the amount of blood lost at a period can be regulated practically at will. Of the fifteen women treated, fourteen were definitely relieved. One came subsequently to operation because of abdominal pain.

Myomata and Fibroid Polyps.—Seven women were subjected to radiotherapy for bleeding from fibroids after malignancy was excluded by curettage. One patient with a fibroid reaching to the umbilicus developed a pelvic peritonitis following radiation. One with a submucous polyp continued to bleed and was subsequently operated. The others were helped. We now restrict the treatment to growths confined to the pelvis in women near the menopause, and in whom submucous polypoid tumors, malignancy or inflammatory pelvic reaction can be excluded.

Endocervicitis.—The leucorrhea from endocervicitis was improved in all cases (four) which were selected for this type of treatment. The radium was applied intracervically. The question as to whether this treatment causes sterility is as yet unanswered.

Chorioepithelioma.—We have treated one case by radium. A woman of fifty-three, para XV, in whom a choriocarcinoma developed fifteen years after a final pregnancy received 3420 mc. hours of radium in one application in the uterine canal. It did not arrest the growth or control symptoms and, two months later, a hysterectomy was done because of the recurrence of the uterine hemorrhage. The case is of interest in that radium is so often urged for this type of case on the ground that it readily kills embryonic cells. It had little or no effect in this case.

SUMMARY

From our review, we feel warranted in concluding that radiotherapy has a definite place in gynecologic therapeutics. We do not believe that it cures inoperable growths, but feel that it aids the patient by cleaning up the ulcer and arresting hemorrhage. This it does in the majority of cases. Death is usually postponed and a large proportion of the cases are temporarily relieved of pain. Even more can be expected in borderline cases. Operable cases should be treated surgically after preliminary radiation. We agree that cancer of the uterine body is best treated by surgery. The bleeding of myomata in properly selected cases, the various metropathies and some of the leucorrheal discharges can be satisfactorily controlled by raying.

DISCUSSION

Roland Skeel, Los Angeles—I have had a little experience with radium but not enough to warrant discussion. The thing that struck me most forcibly in the paper was the fact that twenty-seven per cent of the cases of cervical cancer were nulliparous. I have never seen carcinoma of the cervix in the nullipara.

Wm. Henry Gilbert, Los Angeles—Dr. Skeel said that he has never seen carcinoma of the cervix in the nullipara, I have! It was a fatal case and one on which a Wertheim operation was fol-

lowed by a recurrence treated afterwards with radium without good results. I want to compliment Dr. Maxwell on her paper because I consider it of very great importance. Personally, I have gotten to the point where I don't operate on cancer of the cervix anymore. I refer them all to my radiological friends and I believe that radium, compared to the experience that I have had, with surgery and the use of Dr. Percy's Cautey, is to be preferred. When it comes to cancer of the fundus, I believe that surgery is the method of preference followed afterwards by either radium or deep penetration from the high potency machine. I think that radiation is still in its infancy and we may expect much from it which will open great avenues of hope for these patients.

Frank R. Girard, San Francisco—This is indeed a question that is still in its infancy and I think it will be many years before it is thoroughly decided. Some men are taking the stand now that carcinoma of the cervix and uterus is never a surgical disease but should always be treated by X-ray or radium. I can not bring myself to take this radical stand. There is always the advanced case, as Dr. Maxwell brought out in the paper, which we are powerless to treat by surgery and which can be made comfortable for the remainder of life by radiation. Carcinoma of the body of the uterus is undoubtedly primarily a surgical disease to be followed by radium later. I think the very early cases of cervical cancer which we occasionally see and which I hope we may see oftener, as people become educated to the importance of consulting their physician on the appearance of early symptoms, will be followed by a larger proportion of cures if the radical operation is combined with radiation. I would feel safer treating these cases by surgical methods plus radiation rather than by radiation alone.

James Percy, San Diego—There are so many sides to this question that I have been lying dormant in reference to the cautey. I have been watching my cases and I am interested in the statement that was made in the paper about cauterization having been abandoned. The cautey has never been mentioned in the literature more frequently than at the present time. You can't down the cautey in cancer. It is the only thing that survived with the human race and is still the most certain treatment for cancer that we have. The only thing is that we think of the cautey as a red-hot, white-heat instrument of torture. That day will soon be gone. There is nothing that the cancer cell succumbs to so quickly as heat. Just 113° F. for ten minutes and you cannot transplant any cancer cells. Now it is a mere question of dissemination. It is curious to me that gynecologists have forgotten the work of John Byrne who deplored the use of the knife.

Jones, Long Beach—With regard to the surgery, Dr. Crile says, "Handle the tissues lovingly," and I am very much afraid at times that we do not get results from surgery sometimes because we do not handle the tissues lovingly enough. Personally, I have used, in the last six or seven years, radium following surgery in quite a number of the so-called non-operable cases. I do believe that if we will be more careful in handling our carcinomatous tissue we will not have as many recurrences.

Margaret Schulze, San Francisco—We believe that our results have been a good deal better with the radium than with the cautey. The comparatively good results in the borderline type of case tends to make us consider operating upon a patient very much more seriously than we might have at an earlier time when we did not have the radium. The borderline case does a great deal better with radium than with operation and so we want to make sure that it is not a very early operable case before we subject the patient to radium. Inoperable cases are much better treated by radium alone.

THE TECHNIQUE AND ORGANIZATION OF THE LOS ANGELES MATERNITY SERVICE*

A MUNICIPAL MATERNITY DISPENSARY

By LYLE G. McNEILE, M. D., Los Angeles

The Maternity Service was organized in 1915 by the Los Angeles City Health Department. The staff consists of the author as supervising obstetrician, assisted by five assistant supervising obstetricians, six resident physicians (or internes), and from two to four medical students, who are called externes.

The assistant supervising obstetricians are appointed from the eligible list of junior attending obstetricians to the Los Angeles County Hospital. They act as consultants to the resident physicians, and supervise all treatment, surgical or otherwise, in pathological cases. The resident physicians must be licentiates in medicine, and must have completed an internship of not less than twelve months in an approved general hospital. They are appointed for a term of six months, and receive \$75 per month, with mileage allowance for the use of their automobiles, and room with bed and laundry.

Externes are third or fourth-year medical students who have completed a course in normal obstetrics in an approved medical school, and are appointed for a two weeks' student service.

A central office is maintained at 118 Normal Hill Center, for the purpose of handling all routine clerical work, records, labor bags, obstetrical supplies and many other matters which are routine in a large dispensary. The office is in actual charge of a clerk-stenographer. Cases are reported to the office on a postcard form, or by telephone in case of emergency. The majority of such reports come from district nurses, charitable organizations, clinics, hospitals and other similar agencies. A relatively large number of calls come from new patients who have heard of the service from "old patients."

Upon receipt of a call, the clerk makes out a blank ante-partum record, which is given to the externe (student), on duty. The externe sees the patient within a few hours, recording the medical and obstetrical history, with the result of his obstetrical examination. The patient is given a copy of a leaflet, "Advice to those who are about to become mothers," which is printed in several languages. She is also given a dispensary card, giving the location of the nearest dispensary, and directions for calling the Maternity Service at the time of labor. She is instructed to come to the Maternity Dispensary at least every two weeks throughout pregnancy, and to bring with her at each visit a specimen of urine for examination. If the patient cannot, or will not go to the dispensary, a resident physician sees her at her home at least every two weeks during pregnancy.

All of the externes' work is checked up by the resident physician in whose district the patient lives. The physician, and not the externe, is held responsible for each case, and is compelled to see the case as often as necessary.

* Read before the Section of Obstetrics and Gynecology of the Medical Society of the State of California at Yosemite National Park, May 16, 1922.

All resident physicians and externes make daily reports in writing, giving all details of residence calls and labors during each twenty-four hour period.

MATERNITY DISPENSARIES

At present the Maternity Service is maintaining two dispensaries for the care of pre-natal and post-partum cases. In pre-natal cases at the first visit the patient is examined, external measurements and blood pressure are taken, and a urinalysis made. In normal cases subsequent visits are made at intervals of two weeks, blood pressure and urinalysis always being insisted upon, and examination made if indicated. Internal measurements are taken in early pregnancies, or if otherwise indicated.

We are able to make a post-partum examination of mother and child in nearly all of our cases. Gynecological cases which are not operative are treated in each dispensary, while operative cases are referred to the County Hospital.

Pre-natal care and post-partum examinations are given to women regardless of whether or not they expect to go to the hospital at the time of labor, or whether they are house patients. In addition we care for a comparatively large number of women who expect to employ a physician but are unable to pay for the services of an obstetrician who will give them adequate pre-natal care.

The dispensaries have had a profound educational effect in this regard, and we have noticed that more and more women are coming to demand adequate pre-natal care, because, as they say, they "have noticed that their friends who have received dispensary care get along better at the time of confinement, and are stronger after the baby comes."

The dispensaries are under the direct supervision of an assistant supervising obstetrician, the resident physicians and externes acting as assistants.

COMMUNICATION BETWEEN PATIENTS, PHYSICIANS AND EXTERNES

Los Angeles is such a large city in area that it is not practical to instruct patients to send to the dispensary at the time of labor, or to require resident physicians to remain at a central point while on call.

Each resident physician and externe reports by telephone to the operator on the telephone exchange maintained by the Los Angeles County Medical Association every hour, unless he can be reached through a telephone number left with the operator. The exact time for reporting is so arranged that we have at least one externe and one resident physician reporting on each even hour, and others reporting at 15, 30 and 45 minutes after the hour. All communication between staff and patients is handled through the exchange, this arrangement enabling us to handle calls with a maximum of fifteen minutes delay.

GENERAL ROUTINE IN HANDLING LABOR CALLS

Upon receipt of a labor call, the operator notifies a resident physician and an externe, who see the patient at once. The preparation, examination and delivery are made under the direct supervision of

a resident physician, no student being allowed to assume this responsibility without supervision.

The resident physician, and not the externe, is held responsible for each case, and must see the case at frequent intervals if he leaves after the first examination.

All normal deliveries are cared for in the patient's home, but pathological cases are so far as possible sent to the County hospital and remain on our service in that institution. In cases where home conditions are good, or in which there is great difficulty in persuading the patient to go to the hospital, such operations as low forceps, versions, perineorrhaphies, breech extractions and mild toxemias are handled in the home.

TABLE 1

General Report, Showing Growth of the Service *						
	1916†	1917	1918	1919	1920	1921
Applications received....	427	529	632	773	1073	1428
Women delivered.....	263	348	408	495	648	751
Ante-partum house calls.1020	1796	3194	3158	3204	2371	
Post-partum house calls.1602	2523	3112	3634	5229	5483	
Dispensaries—						
women	756	1604	2042	2047	2556	4093
children	169	353	454	468	336	365

* For fiscal year ended June 30 of the year stated.

† Includes the last ten months of the fiscal year.

STUDENT SERVICE

The student service is two weeks in length. During his first week the student makes from eight to twelve ante-partum and post-partum calls each day, attends the dispensaries, witnesses operative deliveries, and such normal deliveries as are assigned to him.

During his second week he delivered all multiparae under the supervision of the resident physician. From the hour that the student goes on duty, until he leaves, he is under the supervision of a member of the staff. All orders and technique are printed, and are specific. We feel that many of the failures of students are due to lack of specificity in outlining instructions.

RECORDS

All cases are numbered and cross-indexed by name and address. All notations are made at the time the patient is seen, and not entered subsequently from memory.

We have adopted the "Standard Nomenclature of Diseases and Pathological Conditions, Injuries and Poisonings," as issued by the Bureau of the Census, as a guide to nomenclature, and use the code numbers in that volume, with an additional code covering operative procedures, to designate the various obstetrical conditions which are observed.

In order that our results may be available for statistical purposes at any time we have recently adopted, and now have in operation, the modern system of mechanical tabulating and indexing usually known as the Hollerith system. In this system the original records are transferred by means of a machine called the "key punch" to index cards, the record on the card appearing as a series of punched holes representing the code numbers of all data which is desired. Then, by means of a machine called the "sorter" the punched cards can be mechanically sorted at the rate of 250 cards per minute, into any desired arrangement relative to any character or item of information recorded upon the cards. We are using

a modification of the cards described by Pearl in the Johns Hopkins Bulletin, Vol. XXXII, No. 364.

TECHNIQUE DURING LABOR

Upon arriving at a case the resident physician obtains a history of the time when first labor pains were observed, frequency, strength of pains, show, and condition of membranes, thus acquainting himself with the general condition of the patient and the probable rapidity of the labor. If there is apparently ample time for routine care, he then removes coat, rolls up sleeves and dons a short-sleeve non-sterile gown.

After placing a kettle of water on the stove, he now makes a complete physical examination of the patient, including temperature, pulse, blood pressure, auscultation of heart and lungs, abdominal examination to determine presentation and position, the nature of abnormalities, the heart tones of the fetus, and the strength of the uterine contractions. The size of the child is estimated and noted, and the pelvis measured. Pelvimetry is omitted if the patient has received pre-natal care at the dispensary.

The room is now cleared of all unnecessary furniture, and floor covered with clean newspapers, particularly about the bed. A table is cleared off, covered with newspapers, and the contents of the labor bag are removed and placed in a definite order. Since we do all deliveries except breech and operative procedure on the bed, the resident is particularly cautioned to remove all bedding down to the mattress, place three table leaves or their substitutes across the bed between the mattress and springs, protect mattress with a thick covering of clean newspapers, replace sheet, Morrison cushion, and slop bucket for drainage.

Before preparing the patient the resident washes his hands for two minutes under running water, working the soap well under finger nails and into all creases, and pares and cleans nails. All patients are closely clipped, and operative cases shaved. With a sterile wash rag the patient is thoroughly scrubbed with green soap and water from the enciform to the knees, giving special care to the genitals. This same area is then washed off with $\frac{1}{2}$ per cent liquor Cresolis Compositus. The patient then dons a clean night gown if possible.

No vaginal examinations are ever made during labor except upon order and in the presence of an attending obstetrician. The only indication for vaginal examination which we recognize is a pathological condition which cannot be diagnosed by rectal examination. Rectal examinations are made as often as necessary to determine the progress of the case. In making rectal examinations our rules specify that the hands must be washed before each examination, one finger only is used, and extreme care taken to avoid touching the genitalia. All examinations are made in the dorsal position, and finger introduced by sight. Gloves must be boiled before each examination, and must not be used for any purpose other than rectal examinations. They must be kept in a separate glove bag, and not allowed to come in contact

with vaginal gloves or utensils used for vaginal examinations, or delivery.

Before delivery the local preparation is repeated, gloves, hemostats and scissors are boiled, and placed, with solution of $\frac{1}{2}$ per cent liquor cresolis compositus, on a chair beside the bed. Sterile supplies are furnished in tin containers. A principle of our asepsis is the so-called "limited sterile field." By this we mean that only the field immediately surrounding the vulva is considered sterile, and all else is considered to be contaminated. Each container is filled with four sterile towels, five vulvar pads, cord dressing and sterile cotton. While we do not limit the amount of supplies used on a case, we encourage the staff in preventing contact infection by avoiding vaginal examinations and manipulation during labor and delivery, and in keeping their hands "clean" by avoiding contact with anything except the limited sterile field.

All deliveries are done in the dorsal position. We do not give enemata unless specially indicated, because we feel that the danger of infection through the passage of liquid feces is greater than through the solid fecal matter pressed out of the rectum during the second stage.

Our general principles in the conduct of labor are asepsis and watchful expectancy. Fetal heart tones are taken and recorded every two hours during the first stage and every thirty minutes during the second stage.

During the birth of the child the fundus is controlled by the student, but all manipulation is avoided except for indication. No interference is ever attempted for at least twenty minutes except for hemorrhage, and after twenty minutes only if the placenta has separated. Early expression is then done, and one dram of flx. ergot given. The perineum is now examined for lacerations, cleansed, vulva pad and abdominal binder applied. All lacerations are repaired within twenty-four hours to five days.

The infant is cleansed with Squibb's Mineral Oil or olive oil, cord dressed with gauze saturated with 50 per cent alcohol, binder applied, and dressed. As a prophylactic we have had the best results with 1 per cent silver nitrate furnished in wax ampoules by the State Board of Health. This is not neutralized.

Before leaving the patient the resident must note: 1. Mother's temperature and pulse; 2. That the uterus is firmly contracted; 3. That there is no hemorrhage, either internal or external; 4. That the placenta is complete; 5. That there is no hemorrhage from the baby's umbilicus.

POST-PARTUM CARE

During the puerperium the necessity of asepsis is also forcibly emphasized. Daily visits are made by externes and nurses, at each visit the "toilet of the vulva," oiling and dressing of the baby and general nursing care are given. Bowels are opened on the second morning following delivery with one ounce of castor oil, followed each day by two compound cathartic pills. This amount of catharsis might not be necessary were it not a fact that most of our patients are Mexicans, and require drastic treatment.

Breasts are scrubbed with soap and water once daily, and breast binders advised for support. Distended breasts are treated with firm binder, free catharsis and ice bags. Breast pump is never used.

The infant receives a daily oil rub; cord is dressed after the fifth day with alcohol dressing, and then daily until separated. After separation the nurse touches it up with tincture of iodine daily for two or three days. The baby first nurses eight hours after delivery. For the first forty-eight hours the baby is put to the breast for five minutes, every four hours. After the second day the three-hour interval is followed.

TABLE 2

Cost of the Maternity Service by Fiscal Years					
	1917	1918	1919	1920	1921
Equipment	38.50	35.90	293.39	678.28	254.97
Salaries	2100.00	2100.00	3033.35	3478.65	6963.65
Contractual services	220.87	192.02	341.53	445.04	551.42
Supplies	251.22	419.67	622.28	1187.64	2065.25
Total	2610.59	2747.59	4290.55	5789.61	9835.29
Cost per delivery	7.50	6.73	8.67	8.90	13.09
Cost per application	4.93	4.35	5.55	5.39	6.88

END RESULTS

The Service was started on September 1, 1915. Up to and including June 30, 1921, we had delivered 2913 cases.

The maternal mortality for this period was 5, of which 4 died of influenza in 1918, and one died of abruptio placenta in 1920. Our mortality is thus 1 in 582 cases.

The infant mortality for this period was 136, or slightly less than 5 per cent. This includes all stillbirths, and deaths within ten days. It includes all prematures after five lunar months.

H. A. Stephenson, San Francisco—For the past twelve years I have been interested in hospital and outpatient work, especially in obstetrics, and have had the good fortune to review some of the work and be associated with at least three or four supposedly good outpatient clinics and I must say that none of these have quite reached the standard that has been set by Dr. McNeile, and after reviewing his paper very carefully it seems to me that he has an organization that is almost perfect. My experience with outpatient clinics is that there are a good many rough spots in them and it is very difficult, I believe, to follow up a good many of these patients. He seems to have some trouble inasmuch as his applications are about double his number of confinements. Fifty per cent of patients are lost track of, that is about the average in the clinics that I am familiar with. There are four or five things that stand out in this paper all of which tend to congratulate Dr. McNeile. The first one is his ability to impress the Supervisors of Los Angeles sufficiently to give him \$10,000 a year. That is a little different, I think, from the supervisors of most big cities. It is very difficult to get many of the city fathers interested and when one can get \$10,000 a year to take care of clinic and indigent patients, I think one is to be congratulated.

The second is his good fortune in being able to maintain a staff of six well trained assistants and four workable assistants that he can use. When you consider he has two patients a day you can see that it is not a hardship for any of them and yet it is necessary to have at least five or six reliable men to do the work or to see that it is done properly. He is also fortunate, I think, in having associated with the outpatient department the city nursing department. That has been a great drawback in most of the municipal clinics. It has been almost impossible to get nursing care, es-

pecially in the West. It is somewhat better in the East, especially in the City of Boston, where the municipal nursing service is very thoroughly organized. The nursing department, I am sure, should receive a great deal of credit for the results that Dr. McNeile reports. Another factor that he has brought out that we have not been fortunate in having in some of the other places is his stirring up or his inciting interest in the laity by having associated with him the Maternity Service Association, because it is only by stimulating the laity that we can bring pressure to bear, I think, on those who have the disposal of the city's funds in hand. He may have another secret; he told me about it privately and I am not at liberty to mention that.

Then the fourth thing that is very striking, I think, is the follow-up system which he has gone over with me in detail. He is able, for example, to pick out his cases of placenta praevia, by going through his cards at the rate of two hundred and fifty a minute and you can realize what an improvement this is over the system that we have used in the past in a great many of these outpatient clinics in which a number is written down on cards and the cards turned by hand. It takes a great deal of time. Lastly, his results, as far as the mothers are concerned, are wonderful. Only one in 583 patients died. That is certainly a wonderful record for outpatient work. All of his very sick patients he takes to the County Hospital because it is affiliated with the outpatient work, and in regard to that, as a rule, the mortality in hospital work is somewhat high. His infant mortality is very close to the average, the average being around 6 or 7 per cent in the recognized clinics over the States, his running about 5 per cent. I congratulate Dr. McNeile on the work that he has done and I would like to ask one question, and that is, Does he use an anaesthetic on these cases and, if so, what kind and who administers it?

A. L. Munger, San Francisco.—Dr. McNeile's record strikes me as being a very unusual one. Having been associated in this sort of work for the past ten years, I am really surprised at the control that he has managed to obtain of his service. His maternal and foetal mortalities, to my notion, speak most definitely of his ability in handling that service. I think he is to be congratulated upon the results he has obtained.

L. A. Emge, San Francisco—It is not the chair's privilege to take part in the discussions, but I feel that it is the duty of the chairman to congratulate Dr. McNeile on his good work. I have nothing else to add to what Dr. Stephenson has said, but I have seen three of the large outpatient clinics where the problem was comparatively easy, but in spite of good-will, no such results were obtained because the control of one mind was absent. It always takes one mind to see such a thing through. I feel that Dr. McNeile's communication should be taken home to all the communities; and supervisors, city fathers, laity and charitable institutions told that such things can be had for very little money, because \$10,000 for the City of Los Angeles is little money. If Los Angeles can do it, I think the rest of us in other parts of the State could, for the necessity undoubtedly exists, especially in these days of stress where we cannot have private care for all our patients. I feel strongly that Dr. McNeile's paper should be taken up and sent out broadcast to all municipal institutions of our entire State, and I think you could do him no better honor than to take this home with you and tell it whenever you have a chance, to convince the supervisors of the necessity of establishing something similar.

Lyle G. McNeile, Los Angeles (closing)—I want to thank those who have discussed this paper very much. In connection with the anaesthetic, in operative cases, an anaesthetic is given. We are using Dupont's ether and no other anaesthetic agent. In

operative cases it is given by a student, supervised by the resident physician. In normal deliveries, the last year, particularly in primiparae, we have begun the use of anaesthesia during the last part of the second stage. I am personally very much opposed to conducting any labor without the use of an anaesthetic. I think every woman should be given an anaesthetic at least during the second stage. On the other hand, we have been unfortunate down there in being the center of a group of fanatics. We have not only fanatics, but we have the ignorant Mexicans and a certain class of those people who believe that if a child is born of a woman who does not have pain at the time her child is born, the child is condemned to everlasting hell. We are confronted with it repeatedly, so we have to be very careful about giving an anaesthetic, particularly in some types of patients. We have a few Rush men and Eastern men coming in, and gradually we are increasing the number of cases in which we do use ether.

(1021 Pacific Mutual Bldg.)

REPORT OF A CASE OF YAWS IN CALIFORNIA

By HARRY E. ALDERSON, M. D., HARRY C. COE, M. D.
(From the Skin Clinic Stanford University Medical School, San Francisco)

The recent appearance of a well-marked case of yaws in the skin clinic caused us to circularize the profession of the State to find out whether other cases had ever been recognized in California. We sent a comprehensive questionnaire to the dermatologists and all of the health officers of the State. It was also published in the State Board of Health Bulletin.

All replies were in the negative, so we consider that this is the first case diagnosed in California. On account of immigration from Central and South America, and the Orient, it is surprising that the disease has not appeared here. It may be, of course, that on account of its resemblance to syphilis, and the rapid subsidence of the lesions after arsphenamin injections, cases have been missed. Possibly increased watchfulness may result in the detection of more cases in the future.

Patient's Record—The patient, a Filipino, male, twenty-seven years of age, presented verrucous and pustular lesions fairly thickly scattered over his face, neck, chest, and lower limbs, some of which are shown in the photographs. He was fireman on a steamer and formerly was in the United States Navy. Prior to one and a half years ago he had always lived in the Philippines, and his health always had been excellent. There was no evidence of past lues.

In August, 1922, he left for England as cook's helper on a steamer. On his arrival in England he had an eruption on his head and face only, which spread rapidly and to him looked like small-pox. Soon it spread to his trunk and then to his legs. He did not feel ill and continued with his work. Some of the lesions healed, although he had no treatment, and left pigmented scars. Some of the lesions across his shoulders grew large and developed into very painful abscesses.

Our examination showed him to be a muscular and well-nourished young man. He presented small wart-like papular lesions surmounted by yellowish crusts, some of which were grouped, on his face, neck, scalp, upper chest anteriorly and pos-



Yaws Case. Note scattered small verrucous lesions.

teriorly, lumbar region, thighs, and legs. Across the shoulders there were several walnut-sized abscesses resembling gummata. They were quite painful. There were also numerous pigmented, slightly depressed scars scattered all over the body. The patient stated that they were produced by earlier lesions of the disease which healed without treatment. He could not state where the initial lesion appeared, but said that he first noticed a group of them on his face. The Filipino ship's cook, with whom he worked, had many lesions that closely resembled our patient's yaws eruption. We believe that this was the probable source of infection.

There were no scars on the genitalia, and he said that there had not been any lesions there. There was general adenopathy. The blood Wassermann was triple plus (with the cholesterinized beef heart, alcoholic extract and acetone insoluble antigens) in both the water bath and ice-box. Pus from one of the small crusted warty lesions on his neck, examined with the dark field microscope, showed an enormous number of the *spirochaetae pertenuis*.

He was given at once neoarsphenamin (0.6) and three days later 0, 9 of the same, and in a week a repetition of the dose. There was no reaction and after the first injection the lesions rapidly subsided. He was given no other medication. The last time he called he was apparently well. He did not return for further physical and laboratory examinations, as promised, but we received a letter from him two weeks later, stating that he was perfectly well and looking for work in the country. Follow-up letters sent by our social service department were returned undelivered, so it is assumed that he had gone to work.

The photographs were kindly taken by Pro-



Yaws Case. Note large gumma-like lesions. These were quite painful.

fessor Blaisdell, to whom we wish to express our thanks. We greatly regret that through a misunderstanding a biopsy and animal inoculations were not made before the first arsphenamin injection. The second time he called it was too late, as most of the lesions had undergone rapid involution. We feel that the typical lesions, manner of development and course of the disease, the positive dark field findings, and prompt response to arsphenamin justifies our diagnosis of yaws.

(240 Stockton street, San Francisco).

The Diagnosis of Conditions Causing Backache—

The causes of backache are tabulated by George F. Straub, Honolulu, Hawaii (Journal A. M. A., March 10, 1923), as follows: (1) extrinsic (remote): gynecologic; genito-urinary; general abdomen; nervous system; constitutional; (2) intrinsic (direct): congenital; static; traumatic; inflammatory; neoplastic. As to treatment, the genito-urinary causes of backache must be left to the urologist. Those due to toxemias will generally yield to treatment of the focus, plus general measures. Backache in connection with anomalies of the lumbo-sacro-iliac apparatus is opening up a vista regarding prophylaxis, while the treatment is essentially of an orthopedic character. Pain in the back due to weak feet disappears like magic with attention to the fundamental pathologic condition. The lumbago of a myalgic character, once it has become chronic, is amenable to treatment only by proper massage of the affected part of the muscle, vigorously applied to strong muscles, but gently to weak muscles, and above all by injection of saline solution, with or without procain, into the individual nodule. Attention to the general condition of all patients is of equal, if not superior, importance. But above all there must be assured the protection of a definite diagnosis.

A CLINICAL AND PATHOLOGICAL STUDY OF FIFTY CASES OF HYPERTHYROIDISM *

By ROBERT B. HILL, M. D., Los Angeles, Cal.

The pathological changes in the thyroid gland of patients who present the clinical symptoms of hyperthyroidism have been the subject of a great deal of discussion for a number of years. In 1908 Wilson of the Mayo Clinic reported his findings in an examination of 600 simple goiters and 294 thyroids from cases of exophthalmic goiter. He stated that it was possible from a study of the glands themselves, supplemented only by a knowledge of the age and sex of the patient, to state on broad general lines, first, that the patient did or did not have an exophthalmic goiter, as it was then defined; second, the stage of the disease at the time the gland was removed; and, third, approximately the severity of the disease. In his opinion this could be done with a fair degree of accuracy in more than 85 per cent of the cases.

A little later Plummer concluded, from a study of over 2000 cases of goiter that had been operated upon, that it was possible to determine from a study of the clinical aspects of the case alone, first, whether or not the gland was hyperplastic, adenomatous or had advanced colloid changes; second, the effect that might be expected from the removal of a given portion of the gland in any individual case. In his opinion this could be done in 95 per cent of the cases.

These statements were so much in advance of the theories of other observers, that quite naturally they attracted considerable attention. Since then several others have reported their work along similar lines. As was to be expected, some of them do not agree with the conclusions of Wilson and Plummer, the majority believing that neither specific nor constant anatomical changes in the thyroid gland of exophthalmic goiter could be demonstrated, and that it was impossible, as yet, to make definite pathological differentiation between adenomas that produce symptoms of hyperthyroidism and those that do not produce such symptoms.

Goetsch, in 1916, emphasized the importance of the relative number of mitochondria in thyroid adenoma. He reported that they were more numerous in the adenomas causing the symptoms of hyperthyroidism, and that thereby a means was afforded of distinguishing, pathologically, between adenomas producing hyperthyroidism and those that did not. This differential feature is apparently not confirmed by the data reported in his later papers. In 1916 Goetsch also expressed the opinion that there is a very different form of intoxication in thyroid adenoma from that found in true exophthalmic goiter. In this respect he agrees with Plummer.

Crile's views on this question do not coincide with those of either Plummer or Goetsch. In his recently published volume, "Crile's Clinic," he says: "The various types of goiter should logically be regarded as varying degrees of the same or similar processes, and that, certainly as far as treatment is concerned, no differentiation should be

* Read before the Pathology and Bacteriology section of the State Medical Society, Yosemite, May 16, 1922.

made between exophthalmic goiter with hyperplasia and the so-called 'thyrotoxicosis' from adenoma, or of some of the atypical forms of the disease."

In addition to the two distinct clinical entities of adenoma with hyperthyroidism and exophthalmic goiter, Plummer recognizes a small intermediate group. In this group at operation the thyroid is found to have, beside the adenoma, more or less typical areas of hypertrophy and hyperplasia of the parenchyma, varying between very small intra-adenomatous or extra-adenomatous areas to a small adenoma imbedded in a typical hypertrophic parenchymatous thyroid.

Goetsch recently described another condition which he has termed "diffuse adenomatosis of the thyroid," the clinical symptoms being those of a very mild hyperthyroidism. He says that the new tissue characteristically develops from the interstitial cells. The striking difference from adenoma consists in the fact that, instead of isolated islands of interstitial cells developing here and there in the gland, the entire interstitial element, otherwise known as the fetal cells of Cohnheim, simultaneously overgrow, thus causing atrophy of the acinar or alveolar cells of the gland. This results in a very striking picture which is characterized by structureless cellular overgrowth, composed of a great number of interstitial cells, with an associated atrophy of the parenchyma. This picture is the exact opposite of that found in exophthalmic goiter, in which there is a tremendous hyperplasia of the acinar epithelium and an almost complete absence of the interstitial cells.

The clinical symptoms which accompany this later condition seem to be rather indefinite. The basal metabolism is said to be normal. We have not encountered the changes just described in any thyroids that we have examined, nor have we seen any cases clinically that would seem to fall into this group.

From a microscopical study of the last seventy thyroid glands which have come under our observation and have been surgically removed, there were fifty (70 per cent) which showed definite clinical symptoms of hyperthyroidism. An attempt was made, from microscopical study alone, to determine, first, the type of gland; and, second, the number of cases which probably had clinical symptoms of hyperthyroidism. In such an attempt it should be remembered that in developing goiters the vascularity increases, the iodine and colloid content diminish, the follicles become larger and may vary in size and outline, and the epithelial cells increase in size and change from the cuboidal to nearer the columnar type. Such changes constitute simple hypertrophy. If the exciting factor continues to operate there occurs actual proliferation of the epithelium in the follicles, with the formation of new follicles, infoldings, plications and papillary projections of the wall into the lumen of the follicles. When these changes have reached the point just described, there is definite hyperplasia. If the exciting factor ceases to operate, after the gland has passed through the stages of hypertrophy and hyperplasia, there is a tendency for the gland to undergo involution. When invo-

lution or recovery is complete the gland takes on the colloid type.

The adenomas also pass through a series of changes, so that the microscopical appearance depends upon the stage of growth and differentiation, which they have attained at the time of examination.

Of the seventy cases, sixty-six (94 per cent) were correctly diagnosed as to type. There were sixteen hyperplastic goiters, thirty-two toxic adenomas, two mixed glands and twenty non-toxic adenomas and simple colloid goiters.

Fifty-nine (84 per cent) were correctly interpreted as to toxicity. Of the eleven misinterpreted cases six were diagnosed as probably not toxic, but showed clinical symptoms of hyperthyroidism. Five cases were diagnosed as probably toxic, but presented no clinical symptoms of hyperthyroidism.

Very briefly, the clinical symptoms were as follows in cases incorrectly interpreted from the pathological findings:

I. Cases diagnosed pathologically as probably not toxic which showed definite clinical symptoms of hyperthyroidism.

Case 1—Figure 6. Miss B. Age 33. Goiter for eleven years, no symptoms until two years ago. Complained of rapid heart, muscular weakness and vasomotor disturbances. Pulse 116. Blood pressure 118/68. Basal metabolism plus 35.

Case 2—Figure 7. Mr. T. Age 35. Goiter since 18 years of age. Complained of dyspnoea on exertion for the past three years; muscular weakness for past three months; very slight vasomotor disturbance. Pulse 100. Blood-pressure 126/68. Basal metabolism plus 31.

Case 3—Figure 8. Mrs. McC. Age 26. Goiter for ten years. No symptoms until one year ago. Now has marked muscular weakness, palpitation and a fibrillary tremor of the extended fingers. Pulse 108; blood-pressure 130/80. Moderate exophthalmus. Basal metabolism plus 60.

Case 4—Figure 9. Mrs. F. Age 36. Goiter for six years. Heart trouble for past year. Some palpitation, tachycardia and general weakness. Pulse 140. Blood-pressure 120/70. Marked tremor. Basal metabolism plus 45.

Case 5—Figure 10. Miss M. F. Age 40. Goiter for eight years. Past four years has been very nervous and irritable. More or less palpitation. Tires easily. Has fine fibrilla tremor to extended fingers. Pulse 140. Blood-pressure 156/86. Basal metabolism plus 50.

Case 6—Figure 11. Miss N. C. Age 39. Goiter since 15 years of age. No symptoms until two years ago. Since then has had a rapid heart, palpitation, tires easily. Pulse 88. Blood-pressure 144/70. Basal metabolism plus 45.

II. Cases diagnosed pathologically as probably toxic, which clinically showed no symptoms of hyperthyroidism.

Case 7—Figure 12. Mrs. J. W. Age 25. Goiter for past four years, gradually increasing in size. Chief symptom pressure. Pulse 78. Blood-pressure 108/60. Basal metabolism plus 4.

Case 8—Figure 13. Mrs. A. C. Age 57. Goiter since a girl. Never had any symptoms. Removed for cosmetic reasons. Pulse 70. Basal metabolism minus 2.

Case 9—Figure 14. Mrs. M. R. Age 29. Goiter since 14 years of age. Has never had any symptoms. Wanted it removed for cosmetic reasons. Basal metabolism plus 2.

Case 10—Figure 15. Mrs. E. G. Age 35. Goiter for 15 years, gradually increasing in size. No symp-

toms other than a sense of pressure in throat. Basal metabolism plus 4.

Case 11—Figure 16. Mrs. W. H. Age 44. Goiter for 15 years. No symptoms referable to the thyroid. Basal metabolism minus 3.

In arriving at a conclusion regarding the diagnosis of hyperthyroidism, from a resume of my fifty cases, and because this condition frequently presents diagnostic difficulties, I am of the opinion even though the gland be diseased, neither the pathology nor the symptomatology are constant. With the patient under close observation changes in the symptomatology may be noted. Such changes probably are due to an altered physiological action of the hypertrophic cells without any demonstrable histologic change. Therefore, the logical conclusion appears to be that a more accurate diagnosis of hyperthyroidism can be made from the clinical symptoms than the pathological study of the gland.

PHYSIOTHERAPY RECORDS

By MISS HAZEL E. FURSCOTT
(University of California Hospital, San Francisco)

The written physiotherapy record divides itself into two main parts: The physician's orders to the physiotherapist; the report of the patient's progress under physiotherapy to the physician.

The reference of the patient by the physician to the physiotherapy department necessitates a blank form. This form should contain at least the following information: 1, Institutional information; 2, complete diagnosis; 3, prescription for physiotherapy; 4, the physician's signature.

Institutional information includes name, address and attendance. The patient's age and occupation are important, the one to guide us in the prognosis, the other in guiding the patient toward his return to work.

In spite of some contrary opinions, I am firmly convinced that the well-trained ethical physiotherapist should know the complete diagnosis of the patient she is treating. In industrial cases the diagnosis should include details such as the date of injury, the condition of injury, and the character of union in case of fracture. Operative procedures, X-ray findings should be known. The prescription should note when the splint or dressings may or may not be removed, and whether or not movement is contra-indicated. It is very important for the physiotherapist to know what not to do.

I recall a prescription filled out by some one else for the physician. Diagnosis was not given, and the prescription called for hot packs, massage, and active movements. After two days of treatment we were dissatisfied with the progress of the patient and telephoned the physician, when we were informed that an arthroplastic operation had been performed, and there was to be absolutely no adduction at the hip.

The prescription should specify the physiotherapeutic agents to be used, and in all respects the prescription should be written with the same care used in writing a prescription of medicine. The excuse that some physicians are unfamiliar with the methods of physiotherapy and so leave the prescription to the physiotherapist, is not a

valid one. The physician learns how to prescribe medicine, although he does not actually compound it, and likewise he need not know the technical procedures of physiotherapy to intelligently prescribe it. Physicians not infrequently ask the advice of the pharmacist before writing a prescription for medicine. Similar methods in prescribing physiotherapy would lead to an improvement of the present situation.

Many records of patients receiving physiotherapy treatment became of value in settling insurance claims, hence the importance of signatures by the physician to his prescription and by the physiotherapist who gives the treatments.

THE RECORD OF PROGRESS

The physiotherapy record should be a record of progress. If physiotherapy procedures are continued through convalescence, they should show in detail the history of the patient's improvement.

The record should be taken at least once a week by uniform methods, so that there will be at least comparative accuracy at each re-examination. Moreover, the record should not only be intelligible to the physician, the insurance company and the physiotherapist, but to the patient as well. The physiotherapy record and methods of measurement can not and need not conform exactly with the methods in use by permanent rating bureaus of insurance companies, or even those in the physician's office. The permanent rating bureau measures the patient but once, and so is not interested in the minute gains and losses from week to week which it is the function of the physiotherapy record to follow. Moreover, the physiotherapy record is taken when the patient is warm and so does not serve as a permanent record of disability. Figures, degrees of motion, are also not easily intelligible to the patient. The value of the psychological effect of the tangible evidence of progress to the injured patient is very great and for that reason methods of measurement should be graphic as far as possible. They can be made very simple and uniform without the use of intricate machinery. They should be made so that one measurement may be easily superimposed upon another to show comparative progress.

The factors to be recorded are: (1) the range of motion; (2) strength; (3) swelling; (4) pain and its location; (5) muscle spasm; (6) skin condition; (7) wound condition; (8) abnormal joint range, and (9) attitude of the patient.

The factors of swelling, pain, muscle spasm, skin and wound conditions, abnormal joint range and attitude of the patient are often not noted because they are not measurable. These conditions should be recorded routinely at the time of the patient's visit and changes should be noted at least once a week.

The other factors, range of motion, strength and swelling are measurable. Range of motion may be taken by means of a protractor and recorded as degrees or graphically by means of lead tape.

The following outlines indicate the technique of these methods: (1) By means of the protractor, and (2) by means of lead tape.

Protractor Measurements for the Measuring of Range of Motion in Joints

- Note (1) Number of degrees express the range of motion from the zero or neutral position to the extreme active movement being measured. Example: Mid position between pronation and supination is 0 degrees with a possible 90 degrees in both supination and pronation.
- (2) The normal or uninjured corresponding joint may be measured for comparison with the injured joint and so the percentage of loss of movement may be determined. Example:
- Dorsal flexion of uninjured wrist 85°
 ————— Dorsal flexion of injured wrist 35°
 The patient has 35/85 of dorsal flexion in his wrist.

Joint	Movement	Position of part to be measured	Instrument used
Distal phalangeal	flexion	Distal joints flexed—metacarpal phalangeal joint extended	Starrett protractor No. 19
Middle phalangeal	flexion	Closed fist (as nearly closed as possible)	Starrett protractor No. 19
Metacarpal phalangeal	flexion	Closed fist (as nearly closed as possible)	Starrett protractor No. 19
Wrist	dorsal flexion	*Neutral position between dorsal and Palmer flexion, protractor over center of dorsum of the wrist	long-armed protractor
Wrist	Palmer flexion	One arm along extensor surface of forearm; other arm over second metacarpal	long-armed protractor
Wrist	radial flexion	*Mid position—protractor flat—one arm placed along extensor surface of forearm	long-armed protractor
Wrist	ulnar flexion	Joint of protractor at center of wrist and other arm over dorsum of second metacarpal	long-armed protractor
Forearm	supination	*Mid position, elbow pressed close in	protractor parallel to plane of movement
Forearm	pronation	Hand grasps handle of protractor	protractor parallel to plane of movement
Elbow	flexion	Arm in complete flexion	long-armed protractor
Elbow	extension	Arm in complete extension	long-armed protractor
Shoulder	abduction	*Arm hanging at side, protractor joint at center of joint	long-armed protractor
Shoulder	flexion	*Arm hanging at side	long-armed protractor
Ankle	dorsal flexion	Foot in complete flexion	long-armed protractor
Ankle	planter flexion	Foot in complete extension	long-armed protractor
Knee	flexion	Knee flexed	long-armed protractor
Knee	extension	Knee extended	long-armed protractor
Hip	flexion	Hip flexed	long-armed protractor
Hip	abduction	*Hip abducted, using mid position as zero	long-armed protractor

Movements not measured: Thumb apposition; shoulder rotations; inversion of the foot.

This system of protractor measurements is largely an adaptation of that in use by the Industrial Accident Commission of the State of California.

Lead Tape Measurements

To show joint range graphically

Voluntary motion.....red pencil
 Forced motion.....blue pencil

* The zero or mid position is starting point.

Normal motion (the uninjured corresponding joint).....
 For larger joints use lead tape—gauge number.....
 1/8 inch.
 For fingers use lead tape— gauge number.....
 1/16 inch.

Notes for standardization.....
 Mark <— at angle on the lead tape, carefully placing it at the angle of the joint and recording the angle on the tracing so that the succeeding tracing may be superimposed.

Place lead tape:

- 1 over the center of the dorsum of the finger joints for finger flexion and extension;
- 2 moulded between the thumb and index finger for thumb abduction;
- 3 over the center of the dorsum of the wrist for flexion and extension;
- 4 along the ulnar border of the hand in extension for radial and ulnar flexion;
- 5 along the outer side of the forearm and upper arm with the olecranon as the angle for elbow flexion and extension;
- 6 along the axillary border for shoulder abduction (patient in supine position);
- 7 along the center of the dorsum of the ankle for dorsal and planter flexion;
- 8 over the midline of the top of the patella for knee flexion and extension.

Protractor measurements are more practical for pronation and supination of the forearm and abduction and adduction, flexion and extension of the hip and extension of the shoulder.

Both the protractor measurements and lead tape measurements have many limitations. In both there is a great chance for inaccuracy and for the personal equation to enter into making the record. However, they are not to be discarded as they serve to make a record of comparative progress which is, after all, the purpose of the physiotherapy record.

The advantages of the protractor system of measurement are:

- (1) They are more easily reported to the doctor and the insurance company;
- (2) they are more concise for filing purposes;
- (3) such measurements as supination and pronation are possible;
- (4) statistics are more easily compiled.

The advantages of the lead tape system are:

- (1) They are more easily superimposed upon one another from time to time;
- (2) minute gains and losses are more easily determined;
- (3) there is no chance to misread results, confusing range of motion with the angle that the joint assumes;
- (4) it graphically presents to the patient a picture of his progress from time to time.

Keeping in mind that the physiotherapy record is to be one of progress, a practical system of measuring range of motion is to combine the two systems, using the best features of each.

In the physiotherapy department of Hahnemann Hospital we have found this combination practical. Lead tapes are used for all joint measurements where possible, because of the graphic value, and the protractor method is used for supination and pronation.

The following chart represents abduction of the thumb: (1) Graphically, by means of lead tape; (2) by means of protractor.

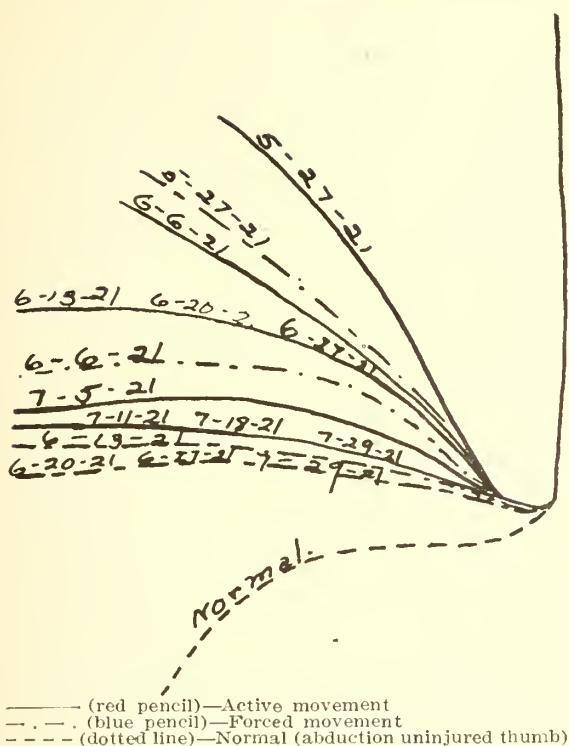
Protractor Measurements					
Abduction of Right Thumb					
	5-27-21	6-6-21	6-13-21	6-20-21	6-27-21
Voluntary...	30/100	50/100	60/100	60/100	68/100
Forced.....	45/100	68/100	85/100	90/100	90/100
	7-5-21	7-11-21	7-25-21	7-29-21	
Voluntary.....	80/100	80/100	80/100	80/100	
Forced.....	90/100	90/100	90/100	90/100	

The same measurements—Graphically recorded by lead tape.

Red = voluntary motion.

Blue = forced motion.

— — — abduction of left (normal) thumb.



The other measurable factors are those of strength and swelling. Here again the elements of simplicity and uniformity must be kept in mind. The elaborate and very expensive machines on the market for measuring strength are undesirable, for in spite of careful technique it is almost impossible to localize movement to one muscle or group of muscles. Of these machines the only one of practical value is the small dynamometer for measuring hand grip.

Recognizing a very definite relation between muscle atrophy and loss of muscle function, we may determine the relative loss of muscle function by determining the circumferential measurements of the injured member and comparing them with those of the uninjured member. A record kept from time to time will show progress in muscle strength. Likewise swelling may be measured and progress noted.

The routine of circumferential measurements is included in the following chart.

For Any Hand, Arm or Shoulder Injury:

Measure- ment	Instru- ment	Place of tapeline	Remarks
Metacarpal- phalangeal joint	tapeline	around metacarpal- phalangeal joint	
Wrist	tapeline	over the styloid prominences	
Forearm	tapeline	4 inches below tip of olecranon	elbow bent
Elbow	tapeline	tip of the olecranon	as complete extension as the joint will allow
Upper arm	tapeline	4 inches above tip of the olecranon	elbow bent
Deltoid (1)	tapeline	axilla	arm hanging at side
* (2)	tapeline	axilla	arm at right angle in ab- duction

* For arm not to be removed from an abduction splint.

For Any Foot and Lower or Upper Leg or Hip Injury:

Measure- ment	Instru- ment	Place of tapeline	Remarks
Metacarpal- phalangeal joint	tapeline	around metacarpal- phalangeal joint	
Ankle	tapeline	around tip of mal- leoli	
Lower leg (calf group)	tapeline	8 inches below top of the patella	leg in exten- sion
Knee	tapeline	mid patella	leg in exten- sion
Thigh	tapeline	8 inches above the top of the patella	leg in exten- sion

For all measurements pull tape as tight as possible. Use steel tapeline as fabric tapes stretch. The measurements 4 inches above and below the olecranon and 8 inches above and below the top of the patella are for the average man. Strength of the forearm muscles may be taken by means of the hand dynamometer.

Muscle Measurements (Circumferential)

Circumferential measurements indicate swelling and atrophy, and indirectly strength. After any injury the routine should include circumferential measurements to all joints and muscles of that part injured and also to those parts where atrophy of disuse might occur.

- These measurements should be taken
- (a) around the joint to show swelling;
 - (b) around the belly of the muscle;
 - (1) to show swelling;
 - (2) to show atrophies.

I have pointed out that records should be of use to science, to the physician, to the physiotherapist, to the insurance company and to the patient. The greatest use should be to medical science. The physiotherapy record is pregnant with data that if collected and tabulated should be a valuable contribution to the science of medicine. The physiotherapy clinic is a human laboratory that is not repeated elsewhere, and through uniform records numerous problems may be solved.

The great need of physiotherapy is a more scientific background and definite correlated data instead of the collection of scattered truths with which we now work. The physiotherapist who does not record her results fails in her duty to her profession and to the science of medicine for she has missed the opportunity of adding material to the outstanding need—that of systematically organized data to place physiotherapy on a sound scientific basis.

Should Physicians Delegate All Social Work—

The young doctors do not nowadays follow the sick poor of our hospitals to their homes. The social service workers do this and the human aspects of the problems of disease are today more commonly touched by the educated nurse than by medicine's new generation. But if these things be so, is it any wonder that the sum total of patients which constitutes our public is becoming increasingly deaf to suggestions which spring from the medical profession and increasingly responsive to those emanating from social uplifters or economic and political reformers?—Martin H. Fischer, M. D., The American Medical Press, January, 1923.

Theories Like Furnished Houses—Theories commonly go in sets like chamber furniture, and you will find a mind furnished throughout, physiologically, philosophically, morally, theologically, in the same shade of color, and with the same general pattern prevailing through all its articles of belief.—Oliver Wendell Holmes.

STUDIES IN FAT DIGESTION *

By M. MARION NULL, M. D., Eagle Rock, Calif.

INTRODUCTION

Much more time and experimental research has been given to the study of protein and carbohydrates in the diet than to the digestion of fats. It has generally been assumed that when fats are eaten under favorable conditions they are thoroughly assimilated, but it is commonly considered that when it is cooked in the food, as in pastry, doughnuts or fried stuff, that it is "hard to digest." Accurate experimental reports on this subject are very meager. The most important were carried on by the United States Department of Agriculture published in Bulletin No. 310, professional papers, where very elaborate work was done on the digestion of many kinds of fats.

The diet in these tests was a blanc-mange, or cornstarch pudding, in which was incorporated a large quantity of fat to be tested. This was given in connection with a commercial wheat biscuit, fruit, tea or coffee, with sugar if desired. The subjects were given this food for a period of three days, and the calculations made on that basis. The coefficient of digestion of the fat was the principal thing to be considered.

To the physician, to the domestic science teacher, and to the housewife who has to feed a family, this investigation is not sufficient. It is important to have food similar to the food of the average home, prepared in the ordinary way; to have food where the fat is heated with starch and protein to the high temperatures as in ordinary cooking, and to have the period extended to a sufficient length of time to test it for a supportive diet. We know that the same foods are affected differently by different combinations of diet and different methods of preparation. We are also aware that very little is definitely known of the nature of the combinations when fats have been mixed with the other food materials to form doughs, batters, and gravies; or when fats are driven into the starch grain or protein molecule at a high degree of temperature, as takes place in the process of frying and baking. To what extent this is a mechanical mixture, and to what extent it may be a chemical change has not been determined. The frying of foods in fat causes a change or difference in taste, and also it increases markedly the nutritional value by the addition of fat. Recognizing these conditions and the possible changes in the food in the process of cooking, I have carried on a series of experiments in the department of physiological chemistry at the University of Washington extending over a period of two years. We have tried in this experiment to arrange a diet that would subject the food to a severe test and at the same time be such a food as is frequently found in the average American home; for example, fried potatoes, pie, shortcake, potato-chips, doughnuts, etc., arranged with other foods as free from fat as possible. With such a diet it was the purpose of this experiment to work out the coefficients of the

digestibility of the various food ingredients and the relative condition of the nutrition of the body.

Scope of the Experiment—This experiment embraces two parts: first, the most popular animal fat found in American homes for cooking purposes was used, namely, pork fat; secondly, the same experiment was conducted by using the most popular vegetable fat, as decided by watching the wholesale departments in one of our largest cities, namely, Crisco. These two fats and fats similar in chemical and physical qualities, furnish the bulk of the cooking fats used in the American homes. A diet was arranged with pork fat amounting to, respectively, 97.7 per centum; and in the second part of the experiment, with vegetable fat amounting to 94.8 per centum of the fat of the food. This fat was fried or baked in the food in the ordinary way and subjected to the high temperatures usually used by the housewife. In addition to this, an ordinary mixed diet of fruits and vegetables was allowed each subject. No restriction was placed upon the amount to be consumed; in fact, each subject was urged to eat as much as he wanted and as much as he would normally. Three men took the diet as arranged in the first part of the experiment to test the digestibility of pork fat and the associated protein and carbohydrate, and one year later the same three men repeated the experiment with the vegetable fat. Each one was a medical student or a physician, and consequently understood the importance of accuracy in carrying out details. One subject took the test diet in the fall, and two in the spring.

Nature of the Diet—It is a well-known fact that lard as commonly bought on the market is composed of the fat of the pig, coming from various parts of the body. In fact, all the fat is rendered and sold in the different grades of lard. Since the composition of lard varies with the variety of breed, the food of the animal and the part from whence it is taken, and since in practical cooking in the home no distinction is made in the fat, we have used in this experiment a good grade of pure commercial lard as bought in the store, and commercial bacon. In other words, we have used pork fat. This represents several fats of different melting points, but it is a fat as used in the ordinary home. The fat thus used contains less than one-half per centum of free fatty acids, together with glycerides of stearic, palmitic, myristic, lauric, oleic, and linolic acids. The bacon was a good grade and when eaten it was fried very crisp. The fat of the bacon was used in frying potatoes and other foods, so that the bacon was used more as a frying fat than as bacon itself. The Crisco was fresh from the factory. Crisco is a vegetable oil, usually cotton seed, hardened by the hydrogenated process until it has a melting point of about 96 F.

The selection of the food and the arrangement of the diet was determined largely by choosing those things that could be subjected to high degrees of temperature in which fat was incorporated, such as fried potatoes, potato-chips, doughnuts, short-biscuits, shortcake, and gravy.

* Read at the meeting of the Southern California Medical Society.

Part One—Pork Fat

Daily Average Amount of Food Eaten					
	Prot. gm.	Fat gm.	Carb. gm.	Ash gm.	Calories gm.
Average per cent	61.5	153	361	16.6	2761
Utilized	82.2%	99%	99.2%	44.6%	
Nitrogen Balance					
	Intake gm.	Output gm.	Balance Output greater than intake gm.	Intake greater than output gm.	
Subject No. 1	56.4	62	5.6	Subject previously on meat diet	
Subject No. 2	63.5	60.7		2.8	
Subject No. 3	56	47.5		8.5	

Part Two—Crisco

Daily Average Amount of Food Eaten					
	Prot. gm.	Fat gm.	Carb. gm.	Ash gm.	Calories gm.
Average per cent	61	98	449	12	2621
Utilized	84.3%	98.9%	98.9%	44.9%	
Nitrogen Balance					
	Intake gm.	Output gm.	Output over intake gm.	Intake over output gm.	
Subject No. 1	62	49.2		11.7	
Subject No. 2	58.5	66.6	8		
Subject No. 3	57.6	55		2.3	

The potatoes were first boiled, then sliced thin in fat, and fried crisp. Potato-chips and doughnuts were made in the usual way, by frying them in deep fat; the temperature for the crisp best product was about 350 F. for lard, and about 400 F. for the vegetable fat. Very short-biscuits were baked each morning—just enough for the day. The first meal they were eaten hot and after that cold. The flour for the gravy was fried very carefully in the fat so as not to scorch, and then made with water. To increase the protein and at the same time not to add any fat, white of egg was given liberally as much as the individual wanted. This was fried in bacon fat in the first experiment, and crisco in the second. In addition to this, fruits and green vegetables were added to the dietary as much as each individual wanted. Granulated sugar was used and tea and coffee if desired.

Detail of Experiment—Each experiment with each subject covered a period of six days or eighteen meals. It was conducted long enough to test the effect of the diet on the subject in reference to nitrogen intake and output, body weight, the digestion of protein, fats and carbohydrates and the absorption of mineral salts. By use of the charcoal marker, as is usually done in such experiments, all feces were weighed, samples dried and analyzed each second day, and all urine collected and analyzed each day from the total sample. Also for the day previous and the day following the experiment the urine was analyzed.

This series of experiments was made as nearly as possible under the same conditions as those referred to in Bulletin No. 310, United States Department of Agriculture. The samples of food and feces and all analyses were made by the standard methods described by the Association of Official Agricultural Chemists. This was done in order to make comparisons with the work already accomplished. All food was carefully weighed, analyzed, and total ingredients calculated and recorded. So far as possible the fat was weighed before it was cooked or incorporated into the food. The object of this was to make the work as simple

as possible and to eliminate error. In the case of mixed foods, such as fruits and vegetables, flour and egg-white, the composition was determined by Bulletin No. 28, Revised Edition, United States Department of Agriculture, as this was considered more accurate because of the vast number of samples analyzed and recorded than could be accomplished in our laboratory. At first, preliminary analyses were made of these things. The results were so nearly those of Bulletin No. 28 as to make the difference immaterial, and in the end we thought less error would result by adopting it for the composition of this portion of the diet.

In the first half of the experiment to test the digestibility of pork fat cooked into the food, one had a slight looseness of the bowels, one was constipated, and one was normal. No. 1 and No. 3 desired more fruit and green food than No. 2, consequently there was more volume to the feces. The subjects complained of no inconvenience or digestive disturbances unless the fat was subjected to a high temperature in the process of cooking so that it smoked and become scorched or partially oxidized. This caused belching and eructation. In the second half of the experiment to test the digestibility of vegetable fat cooked into the food, two were normal and one was constipated. No inconvenience was noticed by either subject, as vegetable fat does not scorch as easily as lard.

General Discussion—In the summary of the first part of the experiment, when pork fat was used, the subjects consumed the daily average of 61.5 grams of protein, 153 grams of fat, 361 grams of carbohydrate, respectively. The average daily caloric value was 2761. Of the fat used, 97.7 per cent was pork fat. The per cent of fat utilized was 97.4 per cent. To make the correction for the metabolic fat, it raises the percentage to 99 per cent of the fat in the food digested and absorbed. The feces were analyzed for starch and sugar, and the calculation based on the percentage of starch content. The average was 99.2 per cent of the carbohydrates digested. It will be noticed that the amount of protein eaten was somewhat below what is usually considered the normal amount, yet each subject had all he desired. The average digestibility of the protein content was 82.2 per cent. In subject No. 1, who was on a meat diet previously, and who excreted 19 grams of nitrogen per urine on the preceding day, dropped down to 9 grams on the second day, when the nitrogen in the experiment showed in the urine and maintained that relative amount throughout the period of the experiment. In the period under consideration he excreted 62 grams of nitrogen, while the intake was only 56.4 grams; 5.6 grams was excreted more than the intake during the six days, but we have reason to believe from the gain in weight (two pounds) and the nitrogen curve, that this was latent excretion of nitrogen from the previous diet. In No. 2, the intake was 63.5 grams with an output of 60.7 grams, making the intake over the output of 2.8 grams. His gain in weight was one pound and four ounces. In No. 3, the intake was 56 grams, the output was 47.5

grams, making an intake over the output of 8.5 grams, with a gain in weight of one pound and eight ounces.

In the second part of the experiment, when vegetable fat was used, the subjects consumed the daily average of 61 grams of protein, 98 grams of fat, and 449 grams of carbohydrate. The average caloric value was 2621. Of the fat used, 95.5 per cent was vegetable fat. The percentage of fat utilized was 96.8 per cent. To make the correction for metabolic fat, it raises the percentage to 98.9 per cent compared with 99 per cent for pork fat. The average digestibility of the carbohydrate content was 98.9 per cent compared with 99.2 per cent for pork fat. The average digestibility of protein content was 84.3 per cent compared with 82.2 per cent for pork fat. In subject No. 1, the intake of nitrogen was 62 grams, the output was 49.2 grams, making an intake over the output of 11.7 grams. His gain in weight was one pound. In No. 2, the intake was 58.5 grams, and the output was 66.6 grams; thus, the output exceeded the intake by 8 grams. He lost two ounces. In No. 3, the intake was 57.6 grams, and the output was 55 grams, making the intake over the output of 2.3 grams. The weight remained constant.

CONCLUSION

The presence in the diet of large quantities of fat cooked into the food did not affect the digestibility of either the protein or the carbohydrates. The subjects gained in weight and the nitrogen equilibrium was maintained, except No. 2, on a vegetable fat. There was very little if any difference in the results between animal and vegetable fats. The pork fat was relished more than the vegetable fat; consequently, more was eaten. It is possible that a mixed diet has slightly increased the percentage of the coefficients of digestion. The subjects enjoyed their food and maintained their strength without any discomforts. So far as this experiment goes, fats cooked into foods at high temperatures were easily digested in normal individuals.

Blood Transfusion By the Citrate Method In Hemorrhages of the New-Born—Frederick H. Falls, Iowa City (Journal A. M. A., March 10, 1923), makes a report on the intravenous injection of citrated blood, using the external jugular vein for that purpose. The method pursued and the instruments used are described in detail. There were fourteen cases in the series. The seriousness of the hemorrhage varied from a slight capillary oozing from a mucous membrane to a severe anemia which resulted from extensive bleeding from the cord, or from a melena. In many of the cases, various remedies had been tried before transfusion was undertaken, such as retying and sewing the umbilicus in cord hemorrhages, or the giving of various other forms of coagulant, such as blood coagulants, horse serum, or human serum under the skin. These measures had failed to produce the desired effect, and so transfusion was resorted to. The operation was followed by recovery in all cases, but in a few it was necessary to repeat the transfusion.

THE PSYCHOSES OF PREGNANCY AND THE PUERPERAL STATE *

By HAROLD W. WRIGHT, M. D., San Francisco

In past years psychiatrists were convinced that a particular form of psychosis was characteristic of the state of pregnancy or the puerperium, and that this entity was definitely due to physiological disturbances or pathological complications accompanying pregnancy. As our knowledge of mental disease has advanced, and our classification of psychoses has become broader and more accurate, we have learned that the insanity of this period cannot be considered as a psychiatric entity.

The state of pregnancy or the puerperium may in some cases be a contributing cause in lowering the psychic resistance of a woman, but with the exception of a delirium accompanying infection, toxæmia, and exhaustion, it cannot be considered the cause per se of any of the forms of insanity. When there is infection or exhaustion the delirium is no different from that which occurs in any other type of infection or exhaustive state.

Formerly, many of the mental disturbances of women were ascribed to some defect in the generative organs, and many gynecologists and general practitioners continue to ascribe most of the nervous or mental disturbances of women to some defect of the generative organs. Pelvic operations, for the reason that patients are neurotic, are rarely performed by the broader-minded and better-informed surgeons.

While it is true that any form of insanity may occur in pregnancy or the puerperium, it appears from an analysis of many cases from State hospital practice and psychopathic hospital services that some types of psychosis are more frequent than others. Thus, in a report from the Danvers State Hospital of Massachusetts by Ricksher, there were out of seventy patients on the acute service thirty-one cases of manic-depressive psychosis, twenty-eight of dementia præcox, only six of delirium, and the remaining five cases were those of general paralysis and senile psychosis and Korsakoff psychosis. My series of patients acutely ill shows approximately the same ratio as to type of psychosis. The manic-depressive syndrome stands out most prominently, and in several instances where a collapse delirium occurred and a febrile state with confusion and hallucinations ensued, a typical manic-depressive picture had preceded this later complication. Although we do not know what causes manic-depressive insanity or dementia præcox, we do know that these forms of psychosis occur frequently without fever or any other evidence of physical abnormality that can be demonstrated. You may ask what is the importance of distinguishing carefully the various clinical types of insanity occurring during pregnancy or the puerperium? The answer is that it is of the utmost importance to know both the clinical type and the previous make-up or personality of the patient, because only by so doing can we make a reasonably correct prognosis as to recovery from the attack or as to the probability of a recurrence

* Read at the general meeting of the San Francisco County Medical Society, October 10, 1922.

after a subsequent pregnancy or some other physical and mental strain upon the individual. It is important to know how the patient has reacted hitherto to the ordinary or extraordinary difficulties of life. In the manic-depressive cases we find many instances of insanity in distant relatives, such as uncles or aunts; in the dementia praecox group we find more nearly related hereditary defects, and in the toxic or infective we find hereditary defects much less frequently.

In spite of unfavorable heredity, a woman may go through pregnancy and labor and the puerperium without mental mishap, providing there has been no prolonged state of worry or unhappiness preceding her confinement, such as illegitimate pregnancy or marital unhappiness and an unwillingness to bear a child. So we need also to know the more intimate life of the patient and the difficulties in the way of making a normal adjustment to her life's problems when we make a prognosis. In some of the writer's patients there had been an illegitimate pregnancy before marriage without psychosis ensuing, and after marriage and subsequent pregnancy by a different lover a manic-depressive psychosis occurred, which would indicate that the association of ideas aroused at this time was the probable exciting cause, or else the predisposing cause.

Why is it desirable to know well the make-up or personality of every such patient? Because many times the clinical picture is not typical or classical, and accurate data will enable the psychiatrist to differentiate between a malignant or a benign form of psychosis when the symptoms alone are not sufficiently typical to make an exact diagnosis. Not infrequently we meet with cases resembling both manic-depressive insanity and dementia praecox, but the make-up or personality of such patients can usually be found typical of the predisposition to one or the other form if we can secure enough information about it from relatives or friends. A history of previous attacks, either with or without childbirth, is of the greatest importance in connection with diagnosis of manic-depressive insanity.

Types of syndromes found in personally observed cases of insanity occurring during pregnancy or the puerperium:

1. *The Manic-depressive Syndrome.*

This is characterized by either depression or elation, inactivity or hyper-activity, and is never accompanied by disorientation or pronounced clouding of comprehension, although the patient may sometimes mislead one into thinking that she is disoriented and hallucinating. This is due to the lack of attention and concentration and the resultant flightiness of talk with misidentification of persons, the latter occurring especially in the maniacal phase in which the patient's imagination is overstimulated so much as to cause her to see slight resemblance in a stranger to someone she has really known. But she is not truly disoriented as in delirium, and after the attack is over she is found to have a very fair memory for the events which occurred during the attack, quite contrary

to the case of delirium in which there is an amnesia for the period of the acute symptoms.

These cases are about equally divided as to the depressed or the maniacal phase of the disease, and not infrequently a depressed or "melancholic" phase is followed by a maniacal phase in which the patient is extremely exalted and happy, followed by recovery. This course has been particularly observed in cases where the childbirth was illegitimate or in cases where the woman was unhappy about her pregnancy for some other reason.

An illustrative case:

E. S. Age 24. Heredity negative. Stable makeup. No previous attacks. Primipara. Labor normal. Out of bed on the seventh day. On the eleventh day high fever accompanying suppurative mastitis. On the fourteenth day she became acutely excited and relatives said she "was out of her mind and talked considerably." Four days later her breast was operated on. She appeared somewhat better but then began to make faces, said New York was turning over, "here is God and I speak to him," laughed, sang and had to be restrained in bed. On admission to hospital two weeks after the onset, temperature 100.6, pulse 94; alcess of breast and mild exhaustion due to previous restlessness. A short time later she was elated, flighty in talk and distractible. Said "Polly English-Irish come here—1, 2, 3.—Marconi—lie down—ask him what language he talks—speak English, this is my birthday—Moscow—Caruso—Mademoiselle—so-so—papa said come here—speak English—loo—Christian nationality," etc.

In about three months she was convalescent and stated that during her illness she felt happy, but at times badly. She was found to have a fairly clear memory for the past events, even those of the early part of her psychosis. She had good insight, realized that her mind had been deranged and her recovery was complete.

2. *The Toxic or Infective-exhaustive Syndrome.*

In this type of case we see true delirium; hallucinations, with fear reactions; and after recovery there is an amnesia for the attack because during it there was disorientation and actual clouding of the sensorium.

An illustrative case:

G. H. Age 21. Bright cheerful disposition without abnormal fluctuation of mood. No former attacks. Primipara. Her labor was prolonged. On the fourth day chills, fever. Fifth day a curetage; sixth day blood clots removed and uterus packed. She then became delirious, spoke of dying—thought the doctor was trying to kill her—was restless, rambling in talk and very confused. She said "No, I won't sleep because God is caring for me—all good people live—I want to go to heaven—suffer all devils—suffer—save—me—my heart is still beating—the devil put a piece in me." Her temperature on admission was 100.2, weight 98 pounds. She was found to be confused for happenings just prior to leaving home and the early part of her hospital experience. She heard voices outside the examining room calling to her and "torturing her." Later she referred to some wicked people who had poisoned her and she was apprehensive in manner due both to visual and auditory hallucinations. The above condition continued for three weeks with brief intervals of a clear sensorium, and then she began to show typical symptoms of the maniacal phase of manic-depressive insanity, being happy in mood, talkative, distractible and flighty in ideas without disorientation, and gradually recovered to normal in the course of three months with a clear memory for events that occurred after

the delirious phase had subsided, in spite of having been maniacal for several weeks following this.

In this patient we see a typical delirium following an infected uterus, and later a typical manic-depressive attack after the infection had subsided. It would seem from her remarks during her delirium that she had some cause for self-reproach and fear prior to confinement, and later in her manic-depressive attack she compensated for this psychologically by becoming elated and jovial, with brief depressive moods before entire recovery. This type of case I frequently observed during a three years' service at the Manhattan State Hospital. The interesting point is that those symptoms, which were due to infection and accompanied infection, were ordinary expressions of delirium, and those which occurred later were without infective causation or accompaniment and were typical of any other cases of manic-depressive insanity, such as occurs in the non-pregnant or non-puerperal state or such as occurs without obvious cause in the male sex.

Neither of these two reported cases had had previous attacks, but in both the age was young and it would not be unexpected if they had recurrent attacks at some later time, even without any puerperal state accompanying them.

3. *The Dementia Praecox Syndrome.*

In all cases of dementia praecox, which become definitely apparent during pregnancy or the puerperium, it is possible to trace out signs of the disease having existed for some time before, and unless there is infection with consequent delirium the symptoms of dementia praecox occurring during the puerperal state are no different from those occurring at any other period of life.

In this disease we usually find a history of a somewhat peculiar type of personality, a shut-in type, reserved, a poor mixer, or a hyper-sensitive easily offended, a suspicious and grudge-holding personality. This is quite a different make-up from that of the person who develops manic-depressive insanity. The latter is of a frank, friendly, spontaneous, warm-hearted, quickly forgiving nature—subject to fluctuations of mood between mild depression of spirits with inactivity and a jovial mood with perhaps excessive business in ordinary affairs of life, practical and aggressive when feeling in the upper mood, still friendly and confiding when in a state of depression if this is not too severe.

In the dementia praecox type delusions of infidelity on the husband's part and excessive jealousy are prominent features. There are apt to be abrupt outbursts of anger, with assaultiveness, perhaps homicide or infanticide, and occasionally suicidal attempts. Hallucinations of the senses, in spite of a clear sensorium, are frequently present, whereas no true hallucinations occur in the manic-depressive type unless there is also delirium due to infection, and then the sensorium is not clear, the patient being disoriented. In dementia praecox she can be found to be correctly oriented in all fields, although she may purposely try to mislead the examiner into thinking she is not, because of her

obstinate, contradictory and negativistic mood or because she refuses to answer questions. Very fantastic delusions may be expressed, such as that the patient is an animal or has been impregnated by a dog or a snake. Delusions of grandeur without any equal evidence of emotional satisfaction in these ideas is a characteristic symptom; e. g., the patient may believe she is the Mother of Christ, or say that she is, but shows no pleasure in the notion, merely stating it in an indifferent manner.

PROGNOSIS

In the dementia praecox type the prognosis is bad for recovery, though the patient may improve so much as to be allowed to live at home at a considerably reduced level of efficiency.

In the delirious type the prognosis is excellent, and if the infection is eliminated entire recovery occurs within a month, but if the physical state has been much reduced either by infection or exhaustion during the period of restlessness, recovery may be very gradual and a condition of depression and neurasthenia ensue before entire recovery. Or the patient may go into a maniacal state lasting several weeks, and then rather quickly recover.

In the pure manic-depressive type of case the duration of the disorder averaged about five months in my series of ten cases; but recovery is complete. The prognosis as to a recurrence, either with or without pregnancy, is in the balance and must be apprehended, but not sufficiently to warrant prevention of conception or an abortion unless the hereditary history is bad.

TREATMENT

All patients except those with the dementia praecox syndrome could be properly cared for in a private room of any well-equipped hospital providing a special nurse is constantly in attendance. This should be done whenever possible, so as to avoid the stigma attached to committing a woman to any institution associated with the care of the chronically insane, because recovery from the mental disorder is certain and the patient needs particularly careful physical attention, and co-operation by a gynecologist may be necessary.

A prolonged tepid bath is the best form of sedative treatment, or as second best a cool pack. The bromides and chloral should be avoided unless there is a condition of uraemia or eclampsia.

Morphine is only indicated as an emergency measure, and as a heart stimulant may be used in the collapse associated with extreme restlessness.

Luminal is probably the best form of hypnotic in doses of grs. 1½ to grs. 3. Frequent feedings of liquid nourishment are especially indicated, and the Murphy drip can be used when tolerated, providing sufficient nourishment or fluid are not taken by mouth.

In the convalescent period sunlight, change of surroundings or tonic diets are desirable. Return to normal amount of social or domestic activity should be very gradual after leaving the hospital, and pregnancy should be avoided for at least a year after complete recovery to normal health.

What conclusions can we draw concerning puerperal psychoses?

An analysis of cases reported in the literature and an analysis of personally observed patients causes me to believe that the puerperium or pregnancy, labor and subsequent infection or toxæmia cannot be the sole cause of the psychoses seen at this period, with the one exception of true delirium accompanying infection, toxæmia or exhaustion from prolonged labor or hemorrhage.

That pregnancy, labor and the puerperal state are exciting causes of the other types of mental disturbance seems to be very likely, but it appears that there must be some basic constitutional predisposition to mental disturbance in these patients, with inadequate ability to withstand worry, anxiety and unhappy circumstances of life associated with the marital state or with illegitimate pregnancy.

In many personally observed patients this inadequacy of mind and prolonged anxiety and unhappiness preceded the period of confinement and predisposed the patient to acute mental disturbance so much as to require only a mild infection, toxæmia, or physical exhaustion to tip the balance. We must remember that anxiety of mind results in physiological disturbances affecting the entire endocrine system, the digestive functions and the circulatory apparatus, and that these physiological disturbances produce by a vicious circle a state of fear, and then the development of delusions is a short step. When elation and superficially jovial and exalted symptoms follow they can be interpreted as compensatory mental reactions in the nature of safety valves to the psyche, similar to those defense reactions which we see so frequently in hysteria, because they offer to the distressed mind an immediate way of getting out of a difficult situation.

Hysteria must be excluded before deciding on abortive measures in an apparently serious mental aspect during pregnancy. Careful observation should make the differentiation clear in a short time, as no case of hysteria can for very long simulate either manic-depressive psychosis or dementia præcox.

The Crown and the Cross—"There is a suffering which purifies, raises and strengthens and in which one can see the Crown as well as the Cross, but where there is no Crown visible it is terrible even to see suffering and must be intolerable to undergo it. My own belief is that if we could know all we should understand everything, but there is much in the world that cannot be explained without knowing what came before life and what is to come after it, and of that we know nothing, for faith is not knowledge. All that we can do is to take refuge in reverence and submission. 'God is in Heaven and thou upon earth, therefore let thy words be few' is one way of expressing the reverence, and: 'I was dumb and opened not my mouth for it was Thy doing,' is an expression of submission. They are hard things to say, but I don't know what else is to be said, and it is better to say them than to rail against what we cannot understand, or to attempt to belittle it, and put a gloss upon it. . . . The abyss is unfathomable to those who stand upon the brink, and I fear each of us who has to descend into it must find for himself or herself on what ledges a foot can be placed."—Lord Grey.

AMPUTATIONS IN THE REGION OF THE KNEE JOINT *

By HOWARD H. DIGNAN, M.D.

The whole subject of amputations viewed in the light of function needs reviewing. Most of the operative procedures described in the text-books are survivals from days when the single cut was made, and alcohol was the chief anaesthetic; they should have no place in contemporary literature.

Many of these operative procedures gained early popularity before the time of Lister, when artificial limbs were very crude appliances compared to those of today.

This early popularity has perpetuated many types of amputation, which in the light of progress, should have been discarded. After the late war a better standard was obtained, both in the type of amputation and the site of amputation, which resulted in greatly improved function.

In this paper, only amputations in the region of the knee-joint will be dealt with. If four inches of the tibia, from the tuberosity to the cut end of the tibia can be saved, a leg amputation should be done, and if a good artificial limb is provided a serviceable leg will result. If, however, less than four inches of tibia is available, the joint must be sacrificed, and the amputation giving the best functional result is the Gritti-Stokes, in which the femur is divided just above the condyles and the patella brought over the cut end of the femur. Knee-flex amputations and disarticulations of the knee are very difficult to fit with a limb, and are functionally deficient.

The essential points of a good thigh amputation, briefly enumerated, are:

1. *Shape.* The stump must be cone-shaped, so that the bucket will support part of the body weight on the sides.

2. *End-bearing.* This is not necessary, but it is a very decided advantage, and is easily obtainable by the Gritti-Stokes method.

3. *Scar.* The scar should be small, and must not come on the end-bearing surface. It must not be adherent to the bone or it is liable to tear from the skin tension. The scar of the Gritti-Stokes is posterior and protected from pressure by the tendons of the biceps femoris and the semi-tendinosus.

4. *Bone.* The end of the bone must be smooth and rounded. It must be free from exostoses and bone spicules. These can be prevented if the periosteum is cleanly cut, no strips being left, and all infection avoided.

5. *Nerves.* The nerves should be cut as high up as possible, the medullary sheaths ligated over the cut ends, so that nerve bulbs will be avoided and the nerve axones will not grow out into the surrounding scar tissue, muscles, periosteum, and skin to give distressing and painful symptoms.

The Gritti-Stokes operation is the only one that answers all these qualifications. Its superiority was strikingly demonstrated at the limb-fitting centers in England after the war. They had much better function than the others; many of them had better function than the below-knee amputa-

* Read at the Annual Meeting of the State Medical Society in Yosemite, May 17, 1922.

tions. Some patients, after recovery, by this operation could walk twenty-five miles in a day with only a very slight limp. Other patients who had had knee-flex amputations, after seeing the results following the Gritti-Stokes operation, returned of their own accord and requested reoperation.

This operation was first described by Gritti in 1851. He cut through the condyles of the femur. Stokes greatly improved the operation by cutting through the femur just above the condyles. One wonders why a successful operation, described seventy years ago, has been replaced so long by many other types of less successful operation. Most textbooks of surgery describe some ten different amputations for this region; each with an impartiality which gives not the slightest idea of their ultimate comparative value in terms of function.

Following the description of Gritti's operation, it was widely used in Europe. It had a very high mortality at that time. Gritti's work antedated the period of aseptic technique. Consequently, the more bone cut into during an operation, the more serious the infection. This reason explains the statistics of D. Olivia in 1890, showing a mortality of 68 per cent during the years 1864 to 1866; a higher mortality than accrued with any other amputation in this region. Under these conditions the operation naturally fell into disfavor, and, although improved by Stokes, it never recovered from the odium of a high mortality acquired during its early days. After the advent of asepsis, the method was not put to the test until the last war, from which it emerges alone as the suitable amputation for this region. This operation should never be done where there is any chance of infection. It is better to save as much tissue as possible, and then, when safe, a secondary operation can be done. Tuffier states that in his war experience 90 per cent of amputations had to have a secondary operation.

Description of Gritti-Stokes Operation—A tourniquet is ordinarily used. An oblique circular incision is made anteriorly over the tuberosity of the tibia, and posteriorly just above the condyles of the femur. The patellar ligament is cut, the capsule divided, and the joint opened. The anterior flap is dissected and freed to a point above the condyles. The patella is everted and sawed through, removing the dorsal surface. The soft tissues are retracted and the femur sawed through just above the condyles. The periosteum should be cut away cleanly with the scalpel, as jagged edges left by the saw may develop exostoses and spicules. The ligamentum patella is stitched to the periosteum on the dorsal surface of the femur with chromic gut. Ivory pegs, wire, and other unabsorbable material should be avoided. They prevent firm union and prevent end-bearing. The tendons of the biceps femoris and semi-tendinosus should be sutured to the ligamentum patella in their natural position, maintaining a natural sulcus, which will protect from pressure the scar and the nerve ends. The posterior tibial and common peroneal nerves should be excised two inches higher up. The medullary sheath should be cuffed, a wedge-shaped incision made in the end of the nerve, the sheath pulled

down over the cut end of the nerve and ligated with chromic gut. This method, I believe, gives the smallest percentage of painful nerve bulbs, and prevents the wandering of the axones from the cut end. Hemostasis is taken care of and the stump attended to in the usual manner.

Post-Operative Treatment—A new stump will not be ready for a permanent artificial limb for from two to five months. It must first be reduced, all fat removed, and the muscular atrophy, incident to amputation, obtained before the permanent limb is made, otherwise three or four limbs will be necessary before the stump has reached its more permanent size.

Tight-fitting elastic pressure-bandages should be applied to the entire stump as soon as it is healed. Massage is begun at the same time, to aid in stump reduction and to maintain a freely movable scar. Passive motion of the hip-joint is started to avoid any limitation of motion in this joint. Shortly after healing has taken place, a pylon should be provided. The plaster pylons are very easily made, and generally two or three are necessary before the stump is reduced to nearly permanent size.

Amputation cases should never be allowed to develop a crutch habit. Many patients, after becoming skilled in the use of crutches, will not take the trouble to toughen their skin sufficiently to use an artificial limb. A week or two only with crutches should be allowed during the time they are learning to walk on a pylon. It takes time and study to learn to wear an artificial limb efficiently, but the results more than justify it.

Some form of pylon is indispensable in the proper after-treatment of amputations. The mode of making the plaster pylon is as follows: The stump is tightly fitted with felt, burlap, or woolen cloth and sewed. An extra two inches is left at the top and bottom. A layer of plaster of Paris bandage is applied, and a smooth, snug bucket molded to the stump. A wooden frame fitted for proper length is now incorporated in the plaster, several turns of plaster being taken over the upper ends of the side-stays to prevent their sliding through. The upper edge of the plaster-bucket is widened and smoothed out, so that it fits the tuber-ischii to give a ring-bearing surface. Two large tape-strands are fixed in the plaster, to be later buckled over the opposite shoulder for support. There are three points of weight bearing: (1) The tuber-ischii on the upper rim. (2) The sides by reason of the cone shape. (3) The end of the stump. If the stump-end is not entirely healed, the bottom of the bucket is left open, and the other points bear the entire weight.

The wearing of pylons is the most important post-operative procedure in the treatment of amputations, designed for the use of artificial legs. To summarize the results obtained by their use, there is: (1) The prevention of the various flexion deformities, hip-joint ankyloses and muscle shortening by giving the patient early practical use of the stump. (2) The toughening of the skin under the tuber-ischii, along the sides of the thigh and on the end of the stump. This must be done be-

fore an artificial limb can be worn comfortably. (3) The reduction of fat and the atrophy of muscle. Pylons reduce stumps more quickly than any other means. (4) The prevention of prolonged use of crutches. Many men seek the line of least resistance and, having acquired the crutch habit, will use their crutches all week, and their artificial limb on Sunday, because they have not acquired the same skill in the use of the limb as they were forced by circumstances to acquire with crutches.

Practically all flexion deformities are developed from the use of crutches. The stump is always held forward in the same position, and in a few weeks the iliopsoas and pectineus muscles contract and shorten, and if untreated a fibrous ankylosis supervenes. Only continued forcible stretching will correct this condition. A limb cannot be worn until it is overcome.

It is hoped that this paper may be the means of assisting some of these patients to obtain less uncomfortable, as well as more serviceable, artificial limbs.

California, Too—In speaking of "Suits Against County Physicians," in the January, 1923, issue of the Long Island Medical Journal, the editor says:

"One of the trying things about the practice of medicine in rural Long Island is the liability of law-suits. At least five such suits were brought against Suffolk County doctors in 1922. Broken bones are especially the excuse for starting suits. The patients themselves are usually satisfied, but they are persuaded by alleged friends that they have been badly treated. To illustrate. A young man with a broken wrist was treated carefully and conscientiously by a physician who possessed both skill and a conscience. After the recovery the wrist was somewhat stiff and tender, as are all broken wrists. A public spirited minister of the Gospel, who had been prominent in the boy scout movement, interested himself in the patient and took him to one of the largest and most scientific hospitals in New York City. There the alleged surgeon told the patient that the result was deplorable, and that the country doctor did not know how to treat broken wrists. On this advice suit was brought, but the plaintiff failed to appear at the trial.

"Every thoughtful physician wishes that he never would see a broken bone; but since he treats fractures for the sake of humanity, his only safe course is to call in at least two consultants and give the case double the attention that it really requires. Consultation in these cases regardless of a fee is a duty which every doctor owes to others, for it is in the nature of an insurance against malpractice suits.

"As for the young, thoughtless internes and associates attending physicians at big hospitals, who seek to magnify their own importance by decrying the skill of rural physicians, they need to feel the discipline of the governing boards and of the county societies. The difficulty, of course, is that they commit nothing to writing, and, therefore, can deny saying anything unethical. Two Utopian rules which should be required of every hospital are: (1) No opinion derogatory to the previous physicians shall be expressed to the patient. (2) A written opinion or diagnosis shall be sent to the previous physician.

"These rules are observed when a physician sends his cases to the hospital. They are equally applicable to all other cases."

THE GENESIS AND TREATMENT OF INSOMNIA *

By HENRY DOUGLAS EATON, M. D., Los Angeles

Insomnia is a popular and much-abused term, used to describe any degree of sleeplessness however mild. The man who has dined too well or the man who is planning a new house frequently describes one or two restless nights as "suffering from insomnia." Such temporary and passing disturbances should not be dignified by the name insomnia, and will not be considered further than to class them as the ordinary average breaks in the sleep habit which fall to the lot of us all. We will confine our present discussion to persistent, long-continued sleeplessness. Such a bad habit when thoroughly engrafted on an individual often lasts months or years, and interferes markedly with its possessor's health and happiness.

Insomnia is, of course, a symptom, not a disease, and is of very little diagnostic importance. Indicative of physical or mental unrest, it acts as confirmatory evidence of physical or mental irritation, but its presence is no definite proof of the existence of any one disease. From our patients' standpoint, and therefore from the therapeutic standpoint, it is of considerable importance.

The text-book etiology of insomnia is as varied as is usually the case in symptoms or diseases where the specific cause is not known. It is found in association with organic and functional disorders, more frequently in the latter type of case.

In this paper I shall discuss the problem on the hypothesis that true insomnia is a nervous disorder, dependent for its existence on psychic disturbance, on a disturbance in consciousness. Such a disturbance in consciousness may be induced by physical or mental causes or, as is usually the case, by a mixture of both. Insomnia, in other words, is not just sleeplessness, but sleeplessness to which anxiety and fear, in regard to its effects as well as frenzied efforts to eradicate it, are added. Furthermore this condition is found associated, in the vast majority of patients, with an underlying condition of mental unrest or nervous disturbance. The seat of insomnia is above the collar, not below. It is a physiological problem, primarily with secondary physical elements, and can only be successfully treated from the re-educational standpoint.

Insomnia is partially, at least, a nervous or mental problem. It must of necessity be so if we remember our physiology, which tells us that the nervous system is involved in any reaction of the organism. The question to be determined from the standpoint of therapeutics is the relative importance of the mental and physical factors in the genesis of this symptom.

Our knowledge of the physiology of the production of sleep is still in the theoretical stage; the exact mechanism remains unsolved, though three theories, the toxic, the cerebral anemia, and the neuron retraction theory, each have their adherents. The scope of this paper does not permit, even were it profitable, a discussion of these the-

* Read before the Neuropsychiatry Section of the California Medical Association, Yosemite National Park, May 17, 1922.

ories; so I will dismiss the first two with this brief mention, accepting the neuron retraction theory as the most promising in my own experience.

This theory is based on the conception that there occurs an actual retraction of the neurons during sleep, thus mechanically breaking the circuit at the synapses and so cutting the brain off from sensory stimuli. This theory remains unproved, though numerous attempts have been made to prove it histologically. It does, however, explain satisfactorily the known characteristics of the rest-sleep state if accepted in the psychological sense. While there is probably not an actual retraction of the dendrites at the synapses, or at least definite proof of such is lacking, there is a raising of the threshold of consciousness to most of the incoming sensory paths; there is a withdrawal of conscious contact with the environment comparable in effect to actual dendritic retraction.

We will presume, then, that the rest-sleep state is caused by a break or at least an increased resistance in the connection from outside world to brain or consciousness, thus producing diminished contact with the immediate environment. Whether toxic substance in the blood or mechanical changes in the blood supply of the brain are additional physical factors remains problematical.

Let us turn now from the theoretical to the practical for whatever our conception of the actual physical mechanism of sleep may be, the intelligent therapy of disturbances of sleep must be based on an understanding of the normal sleep habit. Sleep, however, as shown by comparative physiology and common experiences, is but a part of the larger problem of rest, and so we must first turn to a study of the latter.

The physiologists tell us that in living tissue, whether it be gland or muscle or nerve, periods of activity always alternate with periods of diminished activity, allowing for rest and repair. Such alternation is absolutely essential to the well-being of the organism. In the human machine such periods of relative inactivity for its various tissues are obtained, in a large measure, by regular periods of rest and sleep for the entire organism. This rest may be divided arbitrarily for descriptive purposes into physical rest and mental rest.

Bodily or physical rest consists not in a stopping of all physical activity, for all physical processes continue to a lessened degree, but fundamentally in a cessation of all voluntary muscular effort. When bed is sought and the prone position is taken, effort becomes unnecessary and complete physical relaxation* normally takes place. The prone position relieves, to a considerable degree, the demands on circulation and respiration, and these with practically all the vegetative functions are reduced in activity. Physical rest, therefore, consists in a cessation of voluntary demands plus the placing of one's machine in the position of greatest mechanical ease.

Mental rest, likewise, is a cessation of voluntary effort; a reduction or absence mainly of voluntary control not of the body, but of the mental processes. The basis of such a relinquishment of executive control is a temporary but complete non-

responsibility for the mental content, as well as for what the content may be doing. This non-responsible attitude is the prime essential of mental rest. It co-ordinates and reciprocates perfectly with limitation in control of the voluntary muscles, as well as with the slowing down of all the vegetative processes.

One more element of mental rest, the moral or spiritual aspect, is also of prime importance and it may be summed up in the one word—"acceptance." No one of us can go to bed with our problems all finished, nor completely safeguard ourselves against anxiety for the future, but we can and must learn to declare a truce and accept as the starting place for tomorrow's endeavors the role we find ourselves at present playing as the result of the irrevocable past.

Voluntary effort, mental and physical, means to us all the mobilization of our energies to accomplish some end. Rest is a cessation in this mobilization of our forces, in this preparation for effort. Restlessness, on the other hand, is a state characterized by overmobilization of energy—by having in consciousness, constantly on the verge of expression, more energy than the job at hand can possibly utilize; more really than can be automatically demobilized within the time limits of an ordinary night's rest. The effect of such restlessness is that such periods as should be given to rest are largely occupied by unsuccessful attempts to demobilize this unexpressed and inexpressible accumulation of energy. Such unsuccessful efforts cause the uncomfortable nocturnal state of tossing, turning, endeavors to let go or to let down so familiar to the sufferer from insomnia.

The resting state is typically a relaxation of moral, mental, and physical efforts. It is a relinquishment of trying to control either one's mind, one's body or one's destiny; a demobilization of all voluntary energy. The attention wanders unguided, thoughts flow under it without let or hindrance, guided solely by the laws of association. The mental panorama becomes more and more kaleidoscopic; finally, to go off into dreams. The immediate surroundings become progressively less interesting, the threshold of consciousness is raised to incoming sensory stimuli; the wandering indifferent mind becomes more and more isolated in its own circumscribed world. At this point we lose consciousness, a gap occurs, to be recognized only when we later awaken and realize that such a gap has occurred. This description of the transition from wakefulness to sleep illustrates definitely and completely the relationship of sleep to rest. Sleep is an additional element, recurrent and periodic, grafting itself on rest when certain conditions are propitious. It is not rest but a part of rest, an effect of rest not a cause. It is to be particularly noted that sleep, because it is a by-product of rest, cannot be produced directly, while rest, on the other hand, can be acquired both voluntarily and directly, with a consequent solution of the rest-sleep problem. One can be restless without being sleepless, one can be sleepless without having insomnia. Being restless and, therefore, sleepless, and then in addition worrying about

the condition and making frantic efforts to sleep, inevitably results in insomnia.

We are now in a position to understand why insomnia is found associated with so many different and unrelated disease conditions. Analysis of the disease or drugs commonly listed as causing insomnia shows them to have one characteristic in common; namely, stimulation or irritation, with or without actual inflammation, of nerve structures. The brain may be affected chemically or mechanically through the blood stream or spinal fluid or through the sensory nerves. In either case undue stimulation of the brain results with a consequent undue disturbance in consciousness and, therefore, mental rest and relaxation is prevented. This explains, I think, why tea, coffee, strychnine, alcohol and tobacco, lead, mercury, tuberculosis, syphilis, pneumonia, septacemias, pyemias, typhoid, influenza, epidemic encephalitis, some endocrine disorders, circulatory disturbance with or without hypertension and indefinite gastro-intestinal disorders are commonly listed as causing insomnia. The very number and variety of these conditions suggests that they bear a casual rather than a causal relationship to the insomnia.

My experience has convinced me that the etiology of insomnia is exactly the same as the etiology of functional nervous conditions in general. Physical factors play a minor role, the real disorders occur in consciousness; it is psychic primarily, physical secondarily.

Insomnia is found most commonly in functional nervous conditions in neurasthenia, psychasthenia, and hysteria, the conditions grouped under the general term of psychoneuroses. Here it is obviously a psychogenetic, mind-made affair, though physical factors may play some small part in its genesis. It is a disease of consciousness, a condition of mental unrest kept going by fear and apprehension in regard to the effects of sleeplessness and the efforts to sleep thus engendered. If physical factors are present they must be recognized and treated, but you will not cure this distressing symptom until you cure the functional nervous disorder which underlies it.

Treatment of the temporary sleeplessness caused by general toxic or circulatory disturbances must obviously be directed at the cause of the condition and the insomnia handled symptomatically by hypnotics or other means.

The results of the immense amount of study devoted to functional nervous conditions during the war confirmed my own opinion, reached some years previously, that re-education, careful physical and mental retraining, based on the principle of giving to the patient an adequate understanding of the mechanics of the condition from which he is suffering, is the only satisfactory method of treatment through which we can hope to cure these cases. Roughly, such an individual's machine must be readjusted for him, at the same time reinstating him as its master. To accomplish such a result one can afford to neglect neither the physical nor the mental aspects of the patient's difficulty, even though the mental disturbance is more fundamental.

The successful elimination of the symptom insomnia depends, likewise, solely on specific re-education of the patient in regard to it. Such an individual must be given a definite explanation of the genesis of this symptom, and the rest-sleep relationship must be rationalized for him. Once this knowledge is accepted it will do much toward automatically solving the whole difficulty, for it must necessarily remove the fear of not sleeping, in the absence of which true insomnia does not exist. Then teach the patient to rest, for resting is a voluntary, easily acquired habit well within the abilities of any sane, reasonably intelligent individual who is given proper help and instruction in the use of his mental tools. When this bit of mental technique has been mastered—and it can be mastered in a much shorter time than it took to acquire the bad habit of insomnia—the whole problem will be permanently solved, for the patient will not only eliminate the insomnia present, but will be prepared to nip in the bud any future recurrence of the symptom.

Hypnotics should never be used in this type of insomnia, save temporarily and then only when their purpose as an artificial and temporary aid in the breaking up of an established bad habit is clearly understood by the patient. I find that I am using them less and less as my experience increases. The use of placebos given with the definite intention of deceiving the patient is never justified, in my opinion. At best, their use is a clumsy, unintelligent method of going all the way round the barn to get in the front door.

Most important of all, do not give the patient the fear of possible bad effects from not sleeping, or keep such a fear going in a similar manner. It is essential to your treatment that you impress upon the patient by your words and actions the true conception that sleep is the non-essential—rest the essential ingredient of a normal day. This is an absolutely safe stand for you to take in handling nervous insomnia, for, strange as it may seem, I have yet to see any patient actually harmed by this type of insomnia and I have been treating such patients for the last ten years.

As a matter of fact, once the patient has learned to rest he will inevitably sleep because, as we have noted, sleep is an automatic habit which will always engraft itself on rest when conditions are propitious. The technique of resting I have described will provide the propitious conditions of physical, mental, and moral relaxation, and the sleep habit, nature's usual resting state when disturbing physical, mental, or moral irritation is not present, will be permanently regained.

The results of such treatment in a series of fifteen hundred cases showed 82.4 per cent remaining much improved or cured after two years.

The limit of this paper has allowed me to cover but sketchily the problem of insomnia. If it has served to impress the mental aspect of this symptom on your attention and, still better, if it has served to interest you in studying it, I will feel that it has amply fulfilled its purpose.

EDITORIALS

SHALL THE RICH PAY MORE?

The question of whether the amount of a physician's fee should vary with the patient's financial condition never has been settled to the satisfaction of all. Physicians usually calculate their charges in accordance with one or more of the following methods: (a) A fixed fee schedule of charges for all alike; (b) An optimum fee schedule at which all charges are made and discounts made to meet varying financial conditions of patients; (c) A fee schedule based upon what the physician considers his time worth. Patients who can't afford the schedule are not given discounts, but are treated free and the rich are charged extra.

All people have an interest in this problem from the standpoint of economic justice. Physicians have the additional responsibility of expressing its fairest solution in the ethics governing their conduct. The law must furnish the final decision where controversy prevents more amicable adjustments. The vast majority of physicians determine the amount of their fees for any particular service upon the basis of a personal fee schedule which they have developed from their own experiences and which they change from time to time, depending upon many conditions. Nearly all physicians also discount their fees from 10 per cent to 100 per cent for a considerable percentage of their patients.

An inquiry upon this point submitted to a series of successful physicians recently brought the information that they collected what they considered their services worth from only about one-third of their patients, and that about another third of their services were rendered without compensation of any kind. The California Medical Association has taken an advanced stand upon the question of fees, by passing a resolution endorsing the plan of charging fees in accordance with the patients' ability to pay, from nothing up to what each physician recognizes as his personal fee schedule. If this practice were more generally employed and more generally understood by the public, every physician's office would become a "medical center," or a "health center," or a "clinic" of the very best kind. Of course, there are a few physicians who have reached that far-from-enviable position in public opinion whereby they can—and a few of them no doubt do—make the practice of their profession a cash-register business. However, there are plenty of the other kind—and good ones, too. Comparatively few physicians actually charge wealthy patients extra high fees. However, some do, and the subject is often discussed both by physicians and the public in general.

An editorial in a recent number of *The Lawyers' Magazine* reviews the question of "Making the Rich Pay More" in an interesting and legal manner. The editorial states:

"An English judge is reported, not long since, to having upheld the right of a physician to charge

a wealthy patient more than he would ask a poor man for similar services.

"There seems to be a conflict in the authorities, in this country, as to whether it is proper to prove the value of the estate of a person for whom medical services were rendered, or the financial condition of the person receiving such services, in estimating their value, in the absence of an express contract. Some decisions favor the admission of such evidence. *Haley's Succession*, 50 La. Ann. 840, 24 So. 285; *Czarnowski v. Zeyer*, 35 La. Ann. 796; *Schoenberg v. Rose*, 145 N. Y. Supp. 831. In other jurisdictions, however, such evidence may not be considered. *Robinson v. Campbell*, 47 Iowa, 625; *Swift v. Kelly*, — Tex. Civ. App. —, 133 S. W. 901.

"In determining the value of professional services rendered, testimony as to the value of a deceased patient's estate has been held inadmissible in the absence of a recognized usage obtaining to graduate professional charges with reference to the financial condition of the person for whom such services are rendered, which had been so long established and so universally acted upon as to have ripened into a custom. *Morrisett v. Wood*, 123 Ala. 384, 82 Am. St. Rep. 127, 26 So. 307.

"On the question of the value of services rendered by a physician, it is stated by the court in *Lange v. Kearney*, 21 N. Y. S. R. 262, 4 N. Y. Supp. 14, affirmed in 127 N. Y. 676, 28 N. E. 255: 'There is also evidence tending to establish a custom or rule of guidance as to charges of physicians for services rendered, and which makes the amount dependent upon the means of the patient, his financial ability, or condition; but this is a benevolent practice which does not affect the abstract question of value, or impose any legal obligation to adopt it, and cannot be said to be universal on the evidence. Indeed, there does not seem to exist any standard by which, in the application of the rule, the amount to be paid can be ascertained.'

"Whatever may be the true principle governing this matter in contracts, the court, in one case at least, is of the opinion that the financial condition of a patient cannot be considered, where there is no contract, and recovery is sustained on a legal fiction. *Cotnam v. Wisdom*, 83 Ark. 601, 119 Am. St. Rep. 157, 104 S. W. 164, 13 Ann. Cas. 25, 12 L. R. A. (N. S.), 1090."

ALUMNI AND FRATERNITY ACTIVITIES DURING THE AMERICAN MEDICAL ASSOCIATION CONVENTION

Alumni organizations of various medical schools, hospitals, and fraternity and fraternal bodies of medical character who contemplate any social or other activity during the American Medical Association convention in San Francisco from June 25 to 29 are requested to communicate with the California Convention Headquarters' office, 806 Balboa building.

The official program for the American Medical Association convention, as well as the auxiliary program which will be issued by the California State Medical Society, is now in course of prep-

aration. We will be very glad to include activities of any medical bodies in one of these publications. The Central Committee and the Committee on Entertainments will be glad to co-operate with any of these bodies toward making their meetings successful.

IS YOUR PRACTICE GENERAL OR LIMITED?

Recently a return postcard was sent out from the California Headquarters of the American Medical Association to each member of the California Medical Society, asking for certain information about the character of practice. This information is wanted by many officers and other members of the A. M. A. in different parts of the United States. Also it will, of course, be particularly valuable to each and every member to have a record of that character in our own files.

A number of the members did not return their cards, and our data is, therefore, incomplete.

If you are one who has not returned his card, please do so at once; and if perchance you have lost your card, fill in the following data and mail it to us as a letter:

Name in full.....

Address..... County.....

My practice includes:

General practice.....; Medicine.....; Yes or No..... Yes or No.....

Surgery.....; Obstetrics.....; Yes or No..... Yes or No.....

Specialty combination..... Name ones included.....

My practice is limited strictly to..... Name of Specialty.....

It should not be necessary to more than intimate the value of this information to the individual members supplying it.

WILL CALIFORNIA FOLLOW WISCONSIN?

Our Legislature, now in session, is devoting time to the consideration of eugenics bills, while the Legislature of the State of Wisconsin, where a eugenic law has been in existence for a number of years, has just passed a law repealing the eugenic law, according to press dispatches, as follows:

Madison (Wis.), March 20.—(By the Associated Press.)—Repeal of the Wisconsin eugenics law, requiring a physical examination before issuance of a marriage license, was voted by the Assembly of the Legislature today. Thousands of innocent couples are induced each year to leave the State to be married with resulting unjust reflection upon them, through operation of the eugenics law, Assemblyman Newcomb Spoor, author of the repeal bill, said. He declared that ministers and various counties as well were losing fees as a direct result of marriages thus diverted.—San Francisco Examiner, March 21.

PROGRESS NOTES ABOUT THE AMERICAN MEDICAL ASSOCIATION CONVENTION

The Central California committee and all of the other committees appointed to handle special features of this convention report progress and co-operation not only in California, but throughout the United States. It looks, at this writing, as if this would be one of the largest conventions ever

held by the A. M. A. More than three thousand Fellows have already indicated by letter or hotel reservations their intention to be present, and reservations are coming in at the present time at a very rapid rate.

The convention diagnostic clinics are one of the strong drawing cards, particularly for Fellows in California and other Western States. There will be 136 of these clinics held in eighteen hospitals in San Francisco and Oakland, on Monday and Tuesday, June 25 and 26. Half of these clinics will be given by distinguished Fellows from other places in the United States, and half of them will be given by our own California men. Each hospital has its own special clinic committee, and all are rapidly completing their programs for these clinics.

Post-convention diagnostic clinics and other activities will be held in various parts of the State, under the auspices of special committees of the county medical societies, as well as special committees from hospitals accredited by the Council on Medical Education and Hospitals of the A. M. A. Arrangements have already been perfected for clinics of this kind in seven hospitals in Los Angeles, three in San Diego, one in Sacramento and in Santa Barbara, and some eight or ten other counties have appointed their committees and have started to work on their programs. These post-convention clinics and social activities will all be held on Monday and Tuesday, July 2 and 3. The central committee on post-convention clinics and social activities has recommended to county societies a program somewhat as follows:

Monday or Tuesday, July 2 or 3

- 10 a. m.—Special meeting of the County Society.
- 10 a. m. to 1 p. m.—Clinics and talks by two or more distinguished visiting Fellows, who are especially invited for the purpose, supplemented by same kind of talks and clinics from two or more local men.
- 1 p. m.—Luncheon—visiting Fellows as guests. During early afternoon visiting Fellows are shown usual courtesies, visiting points of interest in the community, etc.
- 6 p. m. or 7 p. m.—Banquet with all members of the County Society present, together with their wives and such friends as they care to invite to meet the visitors. Following the dinner, two or more speeches on public health, on questions interesting to the public, by the visiting Fellows and such additional speeches by local men as the committee cares to invite.

In other words, a real Post-Graduate Get-Together Day for the County Society and the friends of better medicine.

HAVE YOU SENT IN YOUR CARD?

Some time ago the Finance Committee of the American Medical Association Convention sent a letter to every member of the State Society, enclosing a subscription card. Quite a number of these cards have not been returned.

The committee will shortly prepare another letter on the subject for those members who have not subscribed.

The Finance Committee and all other committees, who are giving not only of their money but of their time as well to make the A. M. A. convention a success, request members who have not

done so to send in their cards with their subscriptions. Follow-up letters are expensive, and we need the money for other purposes.

Won't you please help make this list as small as possible by returning your card at once, so as to decrease the expense in connection with follow-up letters?

Please bear in mind that the American Medical Association is the guest of the State Medical Society, and that every member of the Society should do his duty as one of the hosts of the convention.

OF PARTICULAR INTEREST TO PHYSICIANS AND HOSPITALS

The Judicial Council of the American Medical Association has rendered the following opinion on a point that vitally concerns every hospital that wishes to be classed as an agency of scientific medicine:

"The board of control of any hospital (not maintained by general taxation) has the legal right for reasons sufficient to the board to refuse the privileges of the hospital at any time to any practitioner, regardless of his so-called school of practice. The fact that the person applying for permission to bring to and treat in the hospital a particular patient is licensed by the State to practice does not alter the situation. The medical staff of a hospital likewise has the moral right to refuse to accept as an associate any person whom the staff may consider objectionable for reasons sufficient to the staff, and should insist on maintaining that right."

TO CORRECT AN ERROR

In listing medical organizations on the front cover of the March Journal, through a typographical error "The Radiological Society of North America" was listed as the "American Radiographical Society."

MODERN MEDICINE EXPLAINED BY A MORO SERVANT

[The following is a copy of a letter sent by a Moro servant of an American to his brother. The letter is published by permission of Drs. Walter C. Alvarez and Saxton Pope.—Editor.]

In the name of Allah the merciful and the compassionate, Amen.

This letter from Barahim will arrive to his brother Ali Hassan in Zamboanga.

We are here in Sandakan, my master Alvaring and I. He is sick in a large house which they call a hospital. I pass my time on the verandah of this house, and see many strange sights which are only seen by those who enjoy the favor of the English doctors and those who are sick.

These English people cure by means of strong smells which I think according to their religion must frighten away the *saitans* (devils) *djinns*, and other *genii* which cause illness. The whole house smells frightfully of their strong smells. I asked the Chinese *Tukang Ayer* (Watercarrier) if it was true that the place always bore these strong odors and he said, "Yes, it is the custom of the English." They sprinkle each morning on the floors water into which they pour medicine which has a strong stench. Also they wash towels and clothing in these liquids. The Chinaman mentioned above said that this gives a virtue to the healing of wounds.

They do not torture my master in their healing except through starvation as they will not allow him to eat anything except soup. However, there

is an old man (white) whom they torture daily. His leg is broken which has caused him to remain in bed for five months. This has made sores on his back. It is not their custom to allow him to rest in peace, but each day they lift him on his bed and torture him by pouring on his back the strong smelling liquors I have already told you about. They also cut his flesh with scissors and knives, and have no pity when he cries out. The Chinese aforementioned says that there is merit in healing with this torture, and that it is the custom of the white people. They also truly cure by this means, as he claims to have seen it with his own eyes.

There is a young and comely Chinese girl who is held in reverence even by the white *Tuans* (lords). She scolds them and they do not even make reply, but only smile. This may be due to weakness of the brain due to their respective sicknesses, however. She has the title of "nurse," which I believe is an honorable title with the white people, as they treat her with respect and call her "sister" in their own language.

There is also a "pare" (Catholic priest) who comes each day to the place and talks with the white people who are sick. He talks but little to my master, however, and my master tells me that his chief interest is with those of his own religion and those about to die.

Please tell our mother that I will send to her by first vessel, five pesos, out of which I wish her to buy me one peso of dried shrimp and the rest she may keep. This is from my wages, the result of toil and not from easy gains from gambling.

May peace be with you and all good *Mohammedans*.

The end.

A Development in Industrial Medicine—Carroll S. Bucher, Inc., is a new workmen's compensation service organization in San Francisco which goes beyond the point of giving legal advice only. In fact, it has embraced about every angle of the workmen's compensation act as affects employer and employee, as it furnishes surgical, medical and hospital treatment for injured employees; physical examination of employees and applicants for positions; sanitary and safety engineering and inspections of premises; administrative and clerical service concerning the industrial accident commission and the compensation act, including legal services when required.

Carroll S. Bucher, who is executive director of Carrol S. Bucher, Inc., was formerly compensation attorney for the London Guaranty & Accident at San Francisco. In his new organization he has brought together a staff of medical men who stand high in their profession, including Dr. Walter B. Coffey, who is medical director; Dr. Walter Baldwin, consulting surgeon; Dr. Leo H. Eloesser, plastic surgeon; Dr. James T. Watkins, orthopedic surgeon; Dr. Walter F. Schaller, neurologist; Dr. W. W. Boardman, diagnostician; Dr. Wm. F. Blake, injuries to the eye; Ray Benjamin, attorney for the insurance commissioner of California; and W. B. Cole, sales manager.

The corporation says it will make no charges for administration and clerical services in providing its clients the complete benefits of reports, investigations and trial work before the commission. It announces that good feeling between employer and employee will be stimulated, efficiency increased and the number of accidents reduced. The corporation, Mr. Bucher says, will furnish physical examinations for the purpose of better classification. Investigation, surveys and research, to develop lower ratings is another service which the corporation will give. "The reduction of compensation and medical payments means a reduction in the premium rate for those employers who are insured," says Mr. Bucher. "Such reduction is the result of immediate emergency treatment and organized and efficient medical and executive service." The corporation has offices at 603 Butler building, San Francisco.—Underwriter's Report, February 22, 1923.

COUNTY NEWS

ALAMEDA COUNTY

Fabiola Hospital Accredited by the American Medical Association—Upon the recommendation of the California committee of the Council on Medical Education and Hospitals of the American Medical Association, Fabiola Hospital has been placed on the list of hospitals giving acceptable instruction to interns, and have been so notified in the following letter from that Council:

"In response to your request, and the information and recommendations supplied by Dr. Musgrave, whose committee co-operates with our Council, the consideration of the Fabiola Hospital for the training of interns has been very carefully taken up. It is a pleasure to inform you that the hospital has been placed on the list of hospitals furnishing an acceptable internship, and a notice of this recognition will be published in an early issue of the Journal.

"It is our hope that you will accept this recognition as a pledge of our continued interest, and we trust that your institution will enjoy continued progress."

CONTRA COSTA COUNTY

Contra Costa County Medical Society (reported by L. St. John Hely, secretary)—The regular monthly meeting of the Contra Costa County Medical Society was held at the Abbott Emergency Hospital, Richmond, February 24, Carpenter presiding.

U. S. Abbott made a motion to appoint a committee to investigate the matter of having a clinic, in event it became convenient when the A. M. A. met in San Francisco. The committee was appointed by President Carpenter, as follows: U. S. Abbott, chairman; Denninger-Keser, E. R. Guinan.

Clifford Sweet of Oakland gave a talk on "Dehydration in Diseases of Children," voted by the members to be one of the best talks they had heard in a medical meeting. After the meeting all adjourned to Martin's Grill, where a lunch and discussion was held. Those present were: Denninger-Keser, G. M. Bumgarner, C. E. Camp, Spalding, Clara, J. B. Spalding, U. S. Abbott, John Beard, H. N. Belgium, J. T. Brenerman, P. C. Campbell, E. B. Fitzpatrick, Hall Vestal, E. R. Guinan, C. L. Gregory, F. S. Cook, E. Merrithew, H. L. Carpenter, S. H. Marks, Lloyd A. Clary, Harry Auslen, L. St. John Hely.

KERN COUNTY

Kern County Medical Society (reported by P. J. Cuneo, secretary)—The regular meeting of Kern County Medical Society for February was held at the Kern County General Hospital February 15. The new officials for the year 1923 officiated. They are: George C. Sabichi, president; W. H. Moore, vice-president; P. J. Cuneo, secretary-treasurer; F. A. Hamlin, delegate; A. E. Shaper, alternate; Joe Smith, editor; P. J. Cuneo, editor.

The Society, after disposing of the regular routine business, elected Leland W. Ellis as a member. A discussion of cases followed.

It was decided that the entire membership, resident in Bakersfield, make the trip to Taft for the regular May meeting, and the secretary was instructed to communicate with the Taft members and arrange with them for their part of the program. An enthusiastic meeting is contemplated, as the West Siders are known "to know how." McNamara is to be in charge of the April meeting.

LOS ANGELES COUNTY

Methodist Hospital of Southern California—The

January report of this hospital shows 3375 patient days of service at a cost of \$20,970.59 or a cost per patient per day of \$5.84. Twenty-eight patients were treated free, and 18 were given discounts below the cost of service rendered. There were 46 births and 15 deaths during the month, and 133 operations. Total receipts of the hospital from all sources were \$22,556.57.

PLACER COUNTY

Placer County Medical Society (reported by Robert A. Peers, secretary)—The Placer County Society held its February meeting in Auburn on the evening of February 17. There were present the following members and visitors: Members—C. J. Durand, S. J. Shipman, H. N. Miner, G. H. Fay, J. A. Russell, L. B. Barnes, R. A. Peers, J. G. Mackay, R. T. Rooney, F. L. Horne, R. J. Nicholls, and F. E. McCullough. Visitors—J. N. Ward of Auburn, Samuel H. Hurwitz of San Francisco, and C. C. Tucker of Georgetown.

C. C. Tucker of Georgetown was unanimously elected to membership.

It was moved, seconded, and carried that the Placer County Medical Society contribute \$50 to the American Medical Association entertainment fund, and the secretary was instructed to forward that amount to the Committee on Finance.

The following resolution was adopted: Resolved, That the Placer County Medical Society recommend that its members use the letters "M.D.," indicating Doctor of Medicine, instead of the letters "Dr.," indicating Doctor, in all their literature, cards, signs, and other matters.

The Society next considered the advisability of use by its members of the words "Member of — County Medical Society" on all their literature, cards, signs, and other matters. It was the sense of those members present that they would prefer to have issued by the State Society a certificate certifying to the membership of the doctor in the State Society, and his local County Society, and a resolution to this effect was moved, seconded, and carried.

A letter from Ina M. Richter, secretary California Committee of Arrangements, regarding post-convention clinics, was read and it was decided to co-operate with some other county, preferably Sacramento, and not to attempt to hold a clinic under the auspices of the Placer County Medical Society.

H. N. Miner of Blue Canyon reported on some interesting work with respiratory vaccines.

Samuel H. Hurwitz of San Francisco then addressed the meeting regarding "Newer Aspects of the Treatment of Asthma." Hurwitz went thoroughly into the classification of asthma, improved methods of history-taking, the experimental work which has been carried on by numerous recent investigators, including his own work, and took up in detail the treatment of asthma in the light of results obtained by recent research. The paper was thoroughly enjoyed, and was discussed by all the members present.

RIVERSIDE COUNTY

Riverside County Medical Society (reported by T. A. Card, secretary)—A regular meeting was held at the Chamber of Commerce Rooms, February 12, when the following program was given.

Address by the retiring president, Paul E. Simonds, Riverside.

The Management and Treatment of Toxic Thyroid—Joseph K. Swindt, Pomona. Discussion opened by C. Van Zwalenburg.

At the close of the meeting the members were guests of Clark, Kieth, Keller, Jones, Kocher, and Martin at a buffet supper.

A Statewide effort is being made to enroll all eligible practitioners in county medical societies. Please keep this in mind, and use your influence with any non-member with whom you come in con-

tact. Our membership has been decreased by the loss of several members during the past year.

President Bramkamp wishes that all members of the Riverside County Society who plan to attend the State and National medical meetings, June 21-29, in San Francisco, might make reservations at the same hotel. If this plan meets with approval, reservations may be made through the secretary. Make definite plans if possible, so that suitable accommodations may be secured soon.

Because of the increasing necessity of distinguishing between cultists and regular doctors of medicine, the Council, on January 6, passed the following resolutions:

Resolved, That the Council recommend to members of the State Medical Society, that they use the letters, "M. D.," indicating Doctor of Medicine, instead of the letters, "Dr.," indicating Doctor, in all their literature, cards, signs, and other matters.

Resolved, That a circular letter be sent to the County Societies, requesting their consideration, suggestion, and recommendations on the proposed use by members of such county societies of the words: "Member of the — Medical Society."

The entertainment committee for the American Medical Association Meetings is endeavoring to raise a fund of \$25,000 for the entertainment of the delegates and visitors at San Francisco. This is an innovation, and it is hoped will establish a precedent for other States entertaining the Association in future years. Contributions to this fund may be made through the secretary.

The Society learns with regret of the resignation of Miss Mary J. Currie, R. N., for years superintendent of the Riverside Community Hospital. Our good wishes follow Miss Currie into her new work.

SACRAMENTO COUNTY

Sacramento Society for Medical Improvement (reported by C. E. Schoff, secretary)—The Society met February 20, President Gundrum presiding. There were forty-one members and two visitors present.

F. B. Reardan reported three cases of intestinal amebiasis, with long histories of bowel disorders. One patient with indurated rectal ulcers gave many clinical signs of rectal carcinoma with mass in lower bowel with ulcer formation and induration, which has improved markedly under treatment.

A case of pulmonary gangrene in a woman was also reported by Reardan. Symptoms developed two days after tonsillectomy. Clinical and X-ray findings, odor and sputum were typical of right lower lobe involvement. Rib resection and drainage was followed by recovery. X-ray plates made before, and two months after operation were shown.

N. G. Hale reported a case of bilateral renal calculus in female sixty years of age. Tumor mass was felt in pelvis, and urine contained pus and blood. Ureteral catheterization showed blood from right side, and pus and organisms from the left kidney. The left kidney was removed and contained a stone weighing 180 grammes. Radiogram also showed a calculus in cortex of the right kidney.

H. E. Yates reported two cases of gastric upsets, with clinical, X-ray and laboratory findings of ulcer. No ulcers were found at operation, but appendicitis with adhesions was present in both patients.

Oscar H. Johnson presented the subject of cardiospasm. The speaker brought out the rarity of the condition, difficulty of diagnosis and treatment, and the different methods used—medicinal, dietetic, and mechanical—in treatment, and demonstrated a hydrostatic dilator.

Harris, Reardan, McDonnell, Zimmerman, and Rulison discussed various phases of Johnson's paper.

The question of holding a post-convention clinic, as outlined by the State Committee of the American Medical Association, on July 2 and 3, was brought to the attention of the Society, and upon motion of W. E. Briggs, it was decided to hold such a clinic in Sacramento, and the president ap-

pointed F. N. Scatena, G. N. Drysdale and W. H. Pope, and C. E. Schoff (ex-officio) as members of a committee to make all necessary arrangements.

C. E. Schoff announced that the meeting of the Northern District Medical Society would be at Woodland March 13.

J. H. Parkinson spoke at length on the proposed changes and various special features and problems of Medical Defense and Indemnity.

Sutter Hospital—This new modern hospital, being built by a corporation owned entirely by physicians of Sacramento County, is nearing completion and is expected to be ready for patients about the 1st of September. The building occupies about half a block, and is six stories high. The Spanish type of architecture has been used, and all details are in keeping with this style. The hospital will have 165 beds with solarium and utility departments in proportion. The power plant is complete with modern laundry, refrigeration plant, ice-manufacturing machine, and similar services. The hospital will be operated by a superintendent who is to be selected by the board of directors, and it is their purpose to maintain a high-class, ethical institution as a modern agency of medicine. The officers of the board of directors of the hospital are: G. A. Spencer, president; W. A. Beattie, first vice-president; G. A. Briggs, second vice-president; E. T. Rulison Jr., treasurer; J. W. James, secretary.

SAN BERNARDINO COUNTY

San Bernardino County Medical Society (reported by E. J. Eytinge, secretary)—The Society met February 6 at the County Hospital, San Bernardino, with seventeen members present; sixty-three absent; five guests.

The subject for the evening was "A Consideration of the Modern Phase of Cancer in Every Respect," by James F. Percy of Los Angeles. Discussion, general.

New members reported are: W. W. Fenton, Arrowhead; W. C. Clough, L. C. Kellogg, Loma Linda; M. J. Hart, Redlands, by transfer from Los Angeles County.

The March meeting was held on the 6th at the San Bernardino County Hospital, with nineteen members present and fifty-eight absent. There were eight guests. The program consisted of "Treatment of Acute Infections of the Lower Respiratory Tract," by D. C. Mock; discussion opened by M. J. Hart; "Certain Interesting Blood Diseases," by V. R. Mason of Los Angeles; discussion opened by C. L. Curtiss; "Syphilis of the Nervous System," by S. D. Ingham of Los Angeles; discussion opened by E. J. Eytinge.

J. R. Liverman of Needles has been admitted to membership. T. M. Blythe of Redlands has resigned.

SAN DIEGO COUNTY

San Diego County Medical Society (reported by Robert Pollock)—On February 27 the San Diego County Medical Society was treated to an excellent talk by Nelson W. Janney of Los Angeles on "The Diagnosis and Treatment of Thyro-Pituitary Hypo Functional Syndrome." His lecture was splendidly illustrated with lantern slides and was enthusiastically received by the society.

Lyell C. Kinney has removed to his new offices on Fourth street, where he is splendidly equipped for diagnosis and therapy along X-ray and radium lines.

Clarence E. Rees and Clair L. Stealy have associated themselves together for the practice of medicine in all its branches, and have taken over the offices formerly occupied by Dr. Kinney.

H. P. Newman, from latest advices, is enjoying his trip with the American College of Surgeons in South America.

W. H. Geistweitt, Jr., has returned from Denver and reopened offices in the First National Bank Building for the practice of his specialty—diseases of the ear, nose and throat.

Robert Pollock addressed the San Diego County Dental Society at its regular monthly meeting for March on "The Influence of Metabolism on Tooth Structure."

St. Joseph's Hospital has announced through the daily paper that work will be commenced within a few weeks on the construction of a 200-bed hospital, a reinforced concrete unit of modern construction and equipment to cost about half a million dollars. This is to be the first of a group of buildings to occupy a new site owned by the Sisters of Mercy at the north end of Fifth street, consisting of about five acres ideally adapted for hospital purposes. This will be a substantial and much appreciated addition to the hospital facilities of the city.

The medical staff of the Navy Hospital in Balboa Park is planning an intensive clinical program on tropical diseases for the entire day of July 3, for the benefit of the Fellows of the A. M. A. visiting the southland at the close of the San Francisco convention. The Navy is in a position to furnish abundant and varied clinical material for such a program.

The County Medical Society, in conjunction with the staff of the County Hospital and the staff of St. Joseph's Hospital, will stage a medical and surgical clinic on Monday, July 2; also the Medical Society will keep open house at its headquarters in the First National Bank Building to meet visitors and arrange trips to all points of interest for the benefit of the members of the profession visiting San Diego.

SAN FRANCISCO COUNTY

San Francisco County Medical Society (reported by J. H. Woolsey, secretary)—Meetings were held during February as follows:

February 6—Committee on Medicine. Symposium on Hypertension.

February 13—General Meeting. Symposium on Epidemic Encephalitis.

February 20—Committee on Industrial Medicine. Buckling Fractures, fractures of the surgical neck of the humerus—Emmet Rixford. Arthritis in relation to industrial injuries—A. L. Fisher.

February 27—Committee on Eye, Ear, Nose and Throat. Papers by W. B. Smith, F. C. Cordes, H. B. Graham and L. S. Mace.

The Journal has received an abstract of one of the papers presented at the various meetings. Ernest S. du Bray discussed the subject of "Practical Consideration in the Management of Essential Hypertension."

The term, "Essential Hypertension," denotes a state of primary vascular hypertension without the co-existence of demonstrable renal impairment as can be determined by any test of kidney function. The condition is of frequent occurrence, particularly in private practice, whereas it is less commonly encountered on the medical wards in hospitals. The real nature of the hypertensive process is still unknown, but current opinion tends to support the supposition that numerous underlying factors may play a part in producing an increased blood pressure. Most recently, hereditary tendencies to vascular disease have been emphasized, but other factors, such as excessive mental and physical strain, unhygienic living, recurrent infection, and possibly endocrine disturbances may all be implicated.

The management of these cases must be planned on extremely broad lines, after a thorough study of the individuals' manner of living and habits. The investigation should include a consideration of the patients' work, food, exercise, recreations and interests. At the outset the patient must be convinced that the height of the blood pressure is of far less significance than the conditions that underlie it. In the early cases no rigid restrictions in the diet are required, provided there is no habitual abuse of food. Systematic out-of-door exercise should

be encouraged. Obese individuals should be gradually reduced to their ideal weight by physical training and a reduction in the fat component of the diet. Focal infections should be eradicated, eye-strain corrected, and the bowels regulated. Restriction of sodium chloride to two or three grams per day often is followed by striking symptomatic improvement. Alcohol should be interdicted and tobacco greatly reduced, but entirely eliminated for those persons who show a hypersensitiveness to it. Hydro-therapy, electro-therapy, and massage have a place in the regime. Drugs do not influence the course of the disease, and organo-therapy has no established scientific basis.

In the stages of the process the problem of management is largely one of supporting the circulatory apparatus and protecting the kidney.

French Hospital Accredited by Council on Medical Education and Hospitals of A. M. A.—Upon the recommendation of the California committee of the Council on Medical Education and Hospitals of the American Medical Association, the French Hospital has been accredited by that body for intern purposes, and have been so notified in the following letter from them:

"Your application and information submitted through Dr. Musgrave has been considered very carefully by the Council.

"Because of the constitution of the French Benevolent Society, which maintains your hospital, we recognize a problem which is of mutual interest to your hospital and to the medical profession.

"In view of your attitude toward this problem, and the commendable progress which you have made in the past few years, it is the pleasure of the Council to place your hospital on the list of hospitals approved for the training of interns. A notice of this recognition will appear in an early issue of the Journal."

Franklin Hospital Accredited by American Medical Association—The Franklin Hospital has been placed on the list of hospitals approved for intern training by the Council on Medical Education and Hospitals of the American Medical Association, having received their accredited standing by the following letter from that Council: "The Council has given its best consideration to your hospital as a place for the training of interns or, in other words, for giving the fifth year in medicine. The difficulties that have been overcome and that are to a certain extent yet to be overcome are apparent, and you are to be congratulated on the substantial progress which is evident and which has been noted by Dr. Musgrave in his recommendation. The Council, therefore, gladly accords your hospital a place on the list of hospitals approved for the fifth year in medicine. Kindly be assured of our interest in the future development of your hospital and of its increasing usefulness."

SANTA BARBARA COUNTY

Santa Barbara County Medical Society (reported by A. C. Soper, secretary)—The society met February 12, 1923, at the Cottage Hospital, President Means in the chair. Minutes of previous meeting read, approved and ordered filed.

Samuel Robinson presented a tabulated record of twenty-one cases of various forms of goitre, operated on in the past four years, and showed eight patients with results; also exhibited a schedule of each case, classifying type of case, character of operation, results, symptoms of exophthalmos, tachycardia or tremor, metabolic rate before and after operation, and time elapsed since operation. Discussion by E. O. Campbell, Bakewell, Nuzum, Henderson, Luton, Culler, Koefod, A. H. Williams, Ullmann, Profant, Hamilton, Sansum and Cummings.

Correspondence was read as follows: With the Public Library, in re Dr. Knox's medical books;

committee to examine them. With State Headquarters, in re legislation; also in re use of letters "M. D." on cards and stationery; also in re papers for Ear, Nose and Throat Section of Annual Meeting of A. M. A.

Amendment to by-laws: "The annual dues of the Santa Barbara County Medical Society, beginning January 1, 1923, shall be \$15, payable at any time during January or February." Passed unanimously. Amendment to by-laws regarding assessments, defeated by one vote.

The society met February 26, with President Means in the chair and W. J. Mcclinger acting as secretary pro tem. Members present: Culler, Hotchkiss, Flint, Bakewell, Pierce, Bagby, Nuzum, Henderson, Stevens, Lovercn, Freidell, Profant, Jones and Stoddard. Visitors: Ketter and Isaac.

H. E. Henderson discussed Perthe's disease and presented a case.

W. H. Flint reported a case of embolism of the coronary artery and presented the specimen.

Benj. Bakewell reported a case of mechanical broncho-pneumonia due to inhalation of talcum powder, and exhibited the lung specimen. This being a rare occurrence, it brought out a great deal of discussion.

Motion made by Hotchkiss and seconded by Profant, that there be one regular meeting of this society each month instead of two, passed unanimously.

SONOMA COUNTY

Sonoma County Medical Society (reported by N. Juell, secretary)—The society met February, 1923, with sixteen members present and fourteen absent.

Geo. J. McChesney of San Francisco delivered an address on "Common Ailments of the Feet and Their Treatment."

The March meeting was held on the 8th at Santa Rosa. Sixteen members were present and fourteen absent; four visitors.

George Dewitt Culver delivered an address on "Epithelioma." C. H. Arnold on "Shakespeare as an Inspiration to the Medical Men."

A committee was appointed to arrange for a reception of any visitors who might wish to visit Santa Rosa during the convention of the American Medical Association.

STANISLAUS COUNTY

Stanislaus County Medical Society (reported by R. E. Maxwell, secretary)—The monthly meeting was held at Hotel Modesto with a dinner. Members present were: E. R. McPheeters, C. E. Pearson, L. D. Mottram, Bulpitt and Bulpitt, J. L. Collins, C. R. Fancher, C. E. Kinney, J. A. Cooper, F. R. De Lappe, J. . Hennemuth, E. F. Hagedorn, E. F. Reamer, B. I. Surryhne, R. E. Maxwell.

The following business was transacted: Moved and seconded that twelve copies of Hygeia Journal be paid for by Society and distributed to the various county libraries. Moved and seconded that the article "Why Doctors Do not Advertise," which appeared in A. M. A. Journal, be published in the various county newspapers, and cost for printing be paid by the Society. Recommended that a clinic be held in Modesto for examination of lungs in children suspected of having pulmonary involvement, this clinic and examination to be made by the State Tuberculosis Society, after which Alfred Spalding of San Francisco addressed the Society with a talk on "The X-ray in Unusual Obstetrical Cases," supported by a series of lantern slides. He demonstrated the value of the X-ray in determining with accuracy the pelvic measurements and whether the fetus was dead or alive. He also cited cases of eclamptic convulsions controlled by intravenous administration of paraldehyde.

TULARE COUNTY

Tulare County Medical Society (reported by E. R. Zumwalt, secretary)—The monthly meeting of the Tulare County Medical Society was held at the Masonic hall, Tulare, February 10, with about twenty members present and several visitors. The meeting was devoted to a very brief discussion by Saxton T. Pope of San Francisco, concerning some phases of plastic surgery, followed by Pope's most interesting talk on "Ishi, the last Yana Indian" and a "History of the Bow and Arrow." This was illustrated by a hundred or more slides, and a most enjoyable evening was had. Pope shows evidence of as much skill as an archer as he does in professional lines.

Louise Munch has transferred membership from Hot Springs, Tulare County, to Orange County Medical Society.

The applications of William G. Carson of Cutler, and J. L. Banks of Visalia were received for membership in the Tulare County Medical Society subject to the approval of the board of censors of the State Society.

CALIFORNIA NORTHERN MEDICAL SOCIETY

(Reported by Charles E. Schoff, Secretary)

The association held its midyear meeting at Woodland Sanitarium as a guest of the Yolo County Medical Society on March 13. Fifty physicians and surgeons attended the conference. J. R. Snyder of Sacramento, president of the association, was chairman of the meeting, and C. E. Schoff of Sacramento was secretary.

A resolution was passed requesting that the United States Veterans' Bureau consider the location in California of a sanitarium for ex-service men who are victims of tuberculosis. R. A. Peers of Colfax introduced the resolution, and it was carried unanimously. It was suggested that the Government look over the country about Colfax before it selects a location.

At a morning clinic, F. R. Fairchilds discussed fractures of the long bones, and demonstrated the advantages of the Thomas splint.

Leo P. Bell gave a clinic on Banti's disease. A patient was presented on whom splenectomy had been done.

Robert A. Peers read a paper on "Some Observations on Superficial Tuberculous Lesions and Their Treatment by Tuberculin." He showed one patient with a healed abdominal tubercular sinus, which followed laparotomy for peritonitis. Large doses of O. T. 50 mg. subcuticular caused the sinus to heal. Another patient with ulcer under right breast received large doses of O. T. tuberculin. The local reaction from the tuberculin was intense, but the systemic reaction was slight. There was no exacerbation of the lung or throat symptoms.

N. T. Enloe of Chico discussed the possible cause and treatment of osteomyelitis. He believes there is always a primary cuticular lesion which heals before the bone is involved. The doctor believes the disease may be due to a specific organism not yet discovered.

N. G. Hale read a paper on the progress of urological surgery. He discussed the earlier techniques used in urologic surgery and compared it with present-day methods.

J. D. Dameron and F. B. Reardan presented the surgical and medical aspects of gastric and duodenal ulcer. The subject received a great deal of discussion from both adherents.

The next meeting of the association will be held in November in Sacramento.

HEALING AND HEALERS

By FREDERICK W. CLAMPETT

(Formerly of San Francisco, now resident in Paris)

Paris has had a kind of flutter over the healer, Coue.

But, it is nothing—that calls for much ink. He has been over-estimated and New York City has "caught on," as was to be expected. If he had anything really worth while he might have gone east and brought it to sick Europe. But no, the moment his name began to be exploited, he made for the United States. Why? The States are full of healing cults.

His clinics aroused curiosity and the critics were very plain spoken. A man may be a success in London and Paris and a dead failure in New York City.

Now, a man forty years in the ministry must have come across a good deal of the healing claims, and I thought it might interest readers of "The Examiner" if I were to briefly take note of them and do so kindly and without partiality.

The first to which I will refer is really the last. The other evening a man was pointed out to me in the lounge room of the Hotel Continental, Paris, who had been through a most remarkable experience. In fact it might be said that he is one out of a few in the history of this terrestrial globe who could boast of such an experience.

The man who pointed him out to me is a journalist.

"A few months ago that man was stooped and looked twenty years older. Look at him now!"

My curiosity was aroused and in answer to my question he made this statement: "Into that man's anatomy the glands of a monkey have been surgically grafted, and he believes he has cheated death by at least twenty years."

This gland-grafted man happened to be an ardent believer in the Darwinian theory, which professes to have discovered the missing link. He was, therefore, what the French call—"en rapport" with the descent of mortal man from the monkey.

Of course, under the circumstances, he had no hesitation in submitting to the operation, for he was getting back something that really belonged to him.

It is interesting to turn from this aristocratic Parisian to a brilliant Irishman to discover another type.

For many years George Bernard Shaw suffered from acute dyspepsia. It was of the same kind as that which made Thomas Carlyle a load on his own conscience as well as on the consciences of many others. He tried everything. The best physicians, the most varied medicines, the cults that dabble in the world of spirits and the cults that dabble in the world of mind, but all to no purpose.

He remembered at last that when physicians were scarcest men lived the longest.

So, long before he wrote his play, his mind had been obsessed with the idea—"Back to Methusaleh." That this remarkable man should have lived long enough to celebrate his 96th birthday won his admiration. He never thought of the waste of candles in his birthday cake, almost a thousand in number. He never dreamt of the care he might have been to others in those days when the grasshopper should become a burden.

His mind was riveted to the thought of 96 years.

To live as Methusaleh probably lived was the problem of his life, and he solved it.

Meat and tobacco he cut out. Even a rasher of Limerick bacon, which was his favorite dish, was eliminated. Pipes were destroyed. Alcohol ignored.

Live and think honestly, stick to a vegetable diet, laugh at worry, smile at anxiety, and work, work, WORK, this was his healing formula.

How does it work?

Shaw is on the road toward eighty. Surely he's "going strong."

The best organized cult, if we may except the medical profession, which makes a specialty of healing is what is known as Christian Science.

It claims a growth of extraordinary vigor. It draws its disciples from every walk of life. Men and women of culture, of much reading and thought will be found amongst its most ardent adherents. When I was called upon by "The Examiner" to study the churches in San Francisco, I attended the Christian Science Service. It was most impressive. In fact, next to the service at the Church of the Sacred Heart on Fillmore street, when Father McQuaide preached the sermon, it was the most reverential.

There are many disciples who never attend their service.

When I was Rector of Trinity Church, San Francisco, one of the vestry at that time was being treated by a Christian Science healer, and the family were all Christian Scientists. In making this statement I am betraying no secret, for it was generally known throughout the circle of church members.

In the Episcopal Church there is a healing work known as the "Emmanuel Movement."

It was founded by Dr. Worcester, the rector of a church of that name in Boston. Hence the name.

Healing is the central idea of this special work.

It differs from Christian Science in many ways. But here is one of them: it works in co-operation with the medical profession. A doctor is called in who gives his diagnosis of the case, determining whether the disease belongs to the organic or the functional. Organic troubles are not treated.

The underlying principle is auto-suggestion, and to aid this process hypnotism is freely used.

In the Church of England the healing work has been undertaken by a Mr. Hickson, but the church has declined to sponsor the movement there. Mr. Hickson held a healing mission in San Francisco some years ago, when over 7,000 persons, suffering from every form of disease, physical and mental, presented themselves at the altar.

My frank criticism of that mission might be expressed in short space. The sermons of Mr. Hickson created a profound impression on the congregations, who were brought under the influence of their spiritual power. But I am bound to say that I don't know of anyone who had been physically healed as a result.

Healing from certain spots sacred in history has been quite common, both in France and Ireland.

At Lourdes there have been hundreds upon thousands who in generations past have made their pilgrimage in quest of health. Relics are preserved there, which, it is said, have remarkable healing powers.

There is a sacred spot known in Ireland by the name of Knock. It has been for generations the rendezvous of the sick and crippled, and many cures have been recorded. Priests and laity alike kneel at its shrine and carry away with them particles of the mud.

There is the healing power of the medical profession. It is a fact worth remembering that, while the United States has become flooded with every possible kind of healing cult, the medical profession is growing numerically by leaps and bounds. There never was a time when men and women more eagerly sought the advice of physicians and surgeons.

I have just witnessed a most remarkable celebration in Paris. Pasteur, the immortal Pasteur, had been honored by his country. As the world advances, cults of healing may multiply, but the science of healing, as practiced by our great and honored army of physicians and surgeons, will grow and flourish from strength to strength.—San Francisco Examiner, February 16, 1923.

Pharmacology and Therapeutics

By Felix Lengfeld, Ph. D.

An examination of the reports of the "Council on Pharmacy and Chemistry" for the last year shows gratifying progress. Almost every reputable pharmaceutical manufacturer now submits new preparations to the Council for approval, though but a short time ago some of these tried to ignore the Council, claiming that its rulings were academic instead of practical, and, therefore, unjust. Now practically everybody acknowledges the excellence and impartiality of the Council's work, and is willing to submit to its verdict. This is leading to a valuable standardization of non-official remedies. The reports also show that the faker who deliberately tries to impose upon the medical profession has learned that he cannot put one over on the Council, for each year fewer frauds are submitted to it for approval, and there are fewer rejections. This does not mean that the Council does not reject any preparations offered it, but that the rejection is usually made because the manufacturer, perhaps in all sincerity, makes unjustifiable claims, because the preparation is an irrational mixture, or because the name is misleading. Physicians sometimes state that they have obtained good results from preparations which have been rejected by the Council. If the physician will examine carefully the Council's report, he will find in most cases that he does not differ with it. A good cough mixture may be rejected because it claims to cure influenza, and yet, the physician may find it valuable in certain types of cough. Again, physicians sometimes state that they have used preparations approved by the Council without result. It must be borne in mind that the Council does not guarantee the efficacy of all preparations admitted into N. N. R., but merely declares that there is sufficient evidence, clinical and otherwise, to show that their claims are not unduly exaggerated, and that they may be useful in some cases. It would certainly add to the dignity of both medicine and pharmacy if every physician would ask every detail man whether or not his preparation has been admitted to N. N. R., and if it has not been, find out the reason for its rejection. If the preparation has been admitted, the physician is safe in giving it a trial. If it has not been admitted, he should certainly look into the matter very carefully from all angles before using it.

"Introducing a New Drug—To what extent are the claims made for a new drug tintured by commercial considerations, even though put out as the result of investigations carried out by the scientific staff of a firm of standing? And even if the drug is the result of studies carried out by investigators who have no commercial connection there is the question: To what degree has the investigator's enthusiasm tintured his judgment? An increasing number of physicians abstain from the use of a new drug, until its acceptance for New and Non-official Remedies gives assurance that it is worthy of trial. What seems to be an almost ideal method of introducing a new drug has been followed in the case of "Flumerin," the name given to the disodium salt of hydroxymercuri-fluorescein. This drug has been elaborated by White, Hill, Moore and Young of Johns Hopkins. These men have declared the composition of the drug, have reported animal experiments of promise, and have demonstrated its efficiency in clinical trials. The investigators announce, however, that the drug will not be commercially available unless independent clinical study confirms their favorable finding that the drug is of value in the treatment of syphilis. That syphilologists may feel warranted to make such trials, White and his collaborators requested the Council on

Pharmacy and Chemistry to examine the evidence for the preparation. This, the Council did, and it has published a preliminary report, stating that the drug is suitable for clinical trial in selected cases. If flumerin becomes an addition to our materia medica, it will be as the result of the orderly procedure: (1) Demonstration of its chemical identity and uniformity; (2) animal experiments which give promise of therapeutic value; (3) clinical trials under the auspices of the discoverers, and (4) confirmation of its therapeutic worth by independent clinical investigations." (Journal A. M. A., September 30, 1922, p. 1149.)

The above, quoted from the report of the Council, is another example of the good work being done, and contrasts favorably with past practice in these cases. For instance, only a few years ago, T. Braisford Robertson, a thoroughly reliable and conscientious investigator, isolated from the anterior lobe of the pituitary glands of cattle a substance which he regarded as the growth-controlling principle. He called this tethelin, and it was put on the market by a pharmaceutical house as capable of accelerating the healing of wounds and promoting recovery after inanition. Tethelin, however, was not largely used by the medical profession, and now experiments made at the University College in London failed to show any influence by the oral administration of the anterior lobe substance on the growth of animals. The Council which held up the application for the admission of tethelin into N. N. R. for further evidence has now formally rejected the application.

Insulin—The patenting of insulin by the discoverers seems to have been a wise and necessary step in the right direction. But for this patent which has been turned over to the University of Toronto and will not be used for gain, there would have been a scramble among manufacturers to get insulin on the market as soon as possible, and there would probably have been as many fatalities as cures. Insulin seems a dangerous drug unless properly used and properly controlled. The University of Toronto has licensed one American pharmaceutical house, with the understanding that the product is to be given out so as to minimize the danger. With the permission of the University of Toronto, a number of clinics and institutions all over the country, with proper facilities, were given small quantities of insulin for experimental purposes. As physicians connected with these institutions become acquainted with the technique, they are allowed to purchase insulin for use in their own private practice, the drug being sent them directly from Indianapolis. This may seem a little unfair to other practitioners, but it apparently seems to those in control of insulin the best way to prevent its indiscriminate use and abuse. It is only the beginning, and in all probability the general practitioner will be able to secure all the insulin he needs within a short time. Insulin must be given hypodermatically at frequent intervals with strict control, and it looks as though it will be an expensive luxury, unless some way can be found by which the cost of the treatment can be radically reduced. Those controlling insulin are certainly to be congratulated on the dignified way in which they have gone about introducing it, placing the good of the community far above the hope of gain. Notwithstanding the patent, several manufacturers are already advertising substitutes for insulin given by mouth. These manufacturers play no favorites, and their products are apparently sold to anybody who has the price.

A few months ago each day brought out new vitamin preparations, and everybody was taking vitamins, in tablets, pills, or bonbons. The craze was shortlived, and now vitamin therapy seems as dead as the dodo, although physicians will undoubtedly find occasions in which the medicinal administration of vitamins is necessary.

(Reported by W. A. Puckner, secretary)

During February, the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion in New and Non-official Remedies:

Schick test and Schick test control (Eli Lilly & Co.). Diphtheria toxin-antitoxin (Eli Lilly & Co.). Diphtheria toxin and control for the Schick test (P. D. & Co.). Neo-Silvol, mercuriosal, tincture No. 111, digitalis (P. D. & Co.).

NEW AND NON-OFFICIAL REMEDIES

Bacillus Acidophilus Milk (Lederle)—Whole milk cultured with bacillus acidophilus. It contains not less than fifty million of viable organisms (*B. acidophilus*) per cc. During recent years reports have been published which indicate that the growth in the intestinal canal of the normally present bacillus acidophilus may be increased so as to make it the predominating organism, by the administration of milk inoculated with *B. acidophilus*, by the administration of viable cultures of *B. acidophilus* in conjunction with lactose (sugar of milk) or by administration of lactose alone. The therapeutic value of cultures of *B. acidophilus* is still in the experimental stage. For a discussion of the actions and uses of lactic acid ferment preparations, see New and Non-official Remedies 1922, p. 156. *Bacillus acidophilus* milk (Lederle) must be kept on ice and should be used within one week of the expiration date, which appears on each package. Lederle antitoxin Laboratories, New York. (Journal A. M. A., February 3, 1922, p. 323.)

Theocin Sodium Acetate—A brand of theophylline sodio-acetate (N. N. R.). (See New and Non-official Remedies 1922, p. 357.) Winthrop Chemical Co., New York. (Journal A. M. A., February 10, 1923, p. 401.)

Diphtheria Toxin and Control for Schick Test (P. D. & Co.)—Diphtheria immunity test (New and Non-official Remedies 1922, p. 320), marketed in packages containing one vial of 0.1 cc. of undiluted, standardized diphtheria toxin, one vial of 5 cc. of sterile physiologic solution of sodium chloride, one vial of 5 cc. of diluted control of Schick test, and one sterile syringe point. Each package contains material sufficient for fifty doses. Parke, Davis & Co., Detroit, Mich. (Journal A. M. A., February 17, 1923, p. 475.)

Diphtheria Toxin-Antitoxin Mixture (Lilly)—A diphtheria toxin-antitoxin mixture. (See New and Non-official Remedies 1922, p. 282), each cc. constituting a single human dose and containing 3 L + doses prepared in accordance with the requirements of the U. S. Public Health Service. Marketed in packages of three vials sufficient for one treatment. Eli Lilly & Co., Indianapolis, Ind.

Schick Test (Lilly)—A diphtheria immunity test (see New and Non-official Remedies 1922, p. 320) marketed in packages containing one vial of diphtheria toxin sufficient for ten tests, and a vial of sterile physiological solution of sodium chloride and in packages of ten vials containing toxin sufficient for one hundred tests accompanied by ten vials of sterile physiological solution of sodium chloride. As a control, the Schick test control, representing diphtheria toxin of the same lot treated to destroy the specific exotoxins is supplied. Eli Lilly & Co., Indianapolis, Ind. (Journal A. M. A., February 25, 1922, p. 553.)

PROPAGANDA FOR REFORM

Ginseng—Ginseng has found no place in modern therapy. However, it has been reported that infusions of the extract of ginseng root are diuretic. But the most recent study has shown that the drug does not affect the nitrogen metabolism. Even the quack would find it difficult to discover a tenable potency on the basis of which the use of ginseng could be "boosted." (Journal A. M. A., February 3, 1923, p. 328.)

Mercupressen—From the advertising issued by the Barsa Chemical Co., Inc., 28 West Twenty-third street, New York, for mercupressen, this product is essentially the same as that which the Spiroside Corporation, 28 West Twenty-third street, New York, marketed as "Spiroside." Spiroside was claimed to be composed of metallic mercury, copper sulphate, cypress cones, henna, nutgalls, and dried pomegranates. The product was sold in the form of tablets. For use the tablets were ignited and the fumes inhaled by the patient. The Council on Pharmacy and Chemistry held that the claims for spiroside were unproved and unwarranted, and that the routine use of an inexact method for the administration of mercury is detrimental to sound therapy. The Council's rejection of spiroside was subsequently fully sustained by the investigation of the inhalation treatment of syphilis carried out by Cole, Gericke, and Sollmann. (Journal A. M. A., February 3, 1923, p. 344.)

More Misbranded Nostrums—The following products have been the subject of prosecution by the Federal authorities charged with the enforcement of the Food and Drugs Act: Healing Springs Water (Virginia Hot Spring Co.), a moderately mineralized water, containing bicarbonates of calcium and magnesium, and magnesium sulphate (epsom salt); Brick's Sarsaparilla (Palestine Drug Co.), containing small amounts of sodium salicylate, potassium iodid, plant drug extractives, including sarsaparilla and a laxative drug, sugar, alcohol, and water; Yerk's Wine Extract of Cod Liver Oil (Yerk's Chemical Co.), consisting essentially of compounds of sodium, potassium, calcium, iron, quinin, strychnin, and phosphorus, extracts of plant drugs, possible traces of cod-liver oil, malt extract, sugar, alcohol, and benzaldehyde as a flavoring; Anemia Tablets (Carlos M. Rivoll), containing 95 per cent of milk sugar and small quantities of cinchona alkaloids, charcoal, sulphur, gum and compounds of arsenic, phosphorus, iron, and sodium. (Journal A. M. A., February 3, 1923, p. 343.)

Bayer 205—This is said to be a specific trypanosomid. It is said to have no effect on organisms other than the trypanosomes, even those that are nearly related, such as the spirochetes. Most of the work carried out in this country has been carried out with small laboratory animals, but the successful treatment of two human cases of trypanosomiasis is reported. The composition of Bayer 205 is secret, though a hint as to its chemical composition has been discovered, which suggests that it is a dye of the naphthalene series. It is hoped that in the near future the exact composition of Bayer 205 will be declared so that scientists will feel justified to carry out controlled experiments with the drug. For the present the preparation is in the experimental stage. (Journal A. M. A., February 10, 1923, p. 406.)

A Patented Consumption Cure—The U. S. Patent Office has issued patents for many preparations to be used in medicine, for which there has not been the slightest scientific justification. The most recent and most flagrant lack of intelligent patent law administration is to be found in a patent issued to Serglusion, and exploited by the Savrite Medical Manufacturing Co., Los Angeles, Calif., for an alleged cure for tuberculosis.

This is the patented cure: Pure olive oil, 1 gallon; squill root, 3 pounds; bitter almonds, 1 1/4 pounds; nettle (the plant, except the root), 1 1/2 pounds; red poppy flower petals, 1 pound. These various ingredients are to be mixed, put in a closed container, gradually warmed, and left standing for about seventy-two hours, when the mixture is squeezed, mixed, and filtered. The filtrate comprises the "cure." (Journal A. M. A., February 10, 1923, p. 420.)

The Patent Office a Federal Rip Van Winkle—No branch of our government is of greater impor-

tance to the progress of the country than the Patent Office, provided it is intelligently administered. When the Patent Office is used, however, for an extension of the nostrum business founded on the abuse of patent and trademark laws, it becomes a menace to public health. In 1918, a report of the Committee on Patent Law Revision of the Council on Pharmacy and Chemistry recapitulated the effort made for years by the American Medical Association to bring about patent law reform, and detailed some of the cruder forms of Patent Office insufficiency in the granting of patents for medicaments. The issuance recently for a patent on a preposterous mixture of squill root, nettle, and red poppy flowers in olive oil as a remedy for tuberculosis is a further illustration of Patent Office incompetency.

Both common sense and consideration of the health of the public suggests that the Patent Office should consult the scientific departments of the United States Government conversant with medicine and therapeutics in the issuance of patents on medicinal preparations. (Journal A. M. A., February 10, 1923, p. 405.)

Strychnin and Disturbances of the Vision—The use of strychnin in the treatment of certain visual disturbances appears to be extensive. Its use in ophthalmology was introduced in 1830. In textbooks the claims for the usefulness of the drug in these conditions run from mere assertions regarding the usefulness of the drug in certain eye conditions to statements that it actually increases the acuity and field of vision within an hour after injection of therapeutic doses. Occasionally, there is a statement to the effect that the good results from strychnin are due to psychic influences. And now, ninety-two years after its proposed use, experiments have been made to indicate that the latter opinion is probably correct, and that strychnin is without action on vision. (Journal A. M. A., February 10, 1923, p. 406.)

Brown's New Consumption Remedy—The Post-office Department has issued a fraud order against B. H. Brown, M. D., of Jacksonville and St. Augustine, Fla., and Brown's Magnolia Remedy Co. For some time Dr. Brown, a negro, has been advertising Dr. Brown's New Consumption Remedy, especially to members of his own race who are afflicted with tuberculosis. In 1917, the Federal authorities prosecuted Brown under the Food and Drugs Act, holding that the claims for the preparation were false and fraudulent. Though convicted, he continued making his claims in newspaper advertisements, and in circulars that answered these advertisements. While the Department of Agriculture is helpless to prevent this form of fraud under the provisions of the Food and Drugs Act, the post-office authorities are able to reach this form of fraud. The department filed charges against Brown, and after hearing the defense issued a fraud order against Magnolia Remedy Co. and E. H. Brown. (Journal A. M. A., February 17, 1923, p. 495.)

Allen's Goiter Treatment—At Sheffield, Iowa, the Allen Remedy Co. conducts a mail-order business in "Dr. C. J. Allen's Goiter Treatment." The A. M. A. Chemical Laboratory analyzed the Allen nostrum and found it to consist essentially of ferrous iodide and hydrogen iodide (hydriodic acid) in a colored and flavored syrup. The serious side of the Allen Goiter Remedy Co. business is the indiscriminate sale of the nostrum to those who may be, and are likely to be, suffering from exophthalmic goiter. It is well known that the use of iodine is likely to aggravate this disease, and hence it is not surprising that physicians are beginning to report serious results from the use of the Allen preparation. (Journal A. M. A., February 24, 1923, p. 572.)

JOINT MEETING OF THE AMERICAN AND PACIFIC COAST ANESTHETISTS WITH THE SECTION ON ANESTHESIOLOGY OF THE CALIFORNIA STATE MEDICAL SOCIETY

The joint meeting of the American and Pacific Coast Anesthetists with the Section on Anesthesiology of the California State Medical Society, at the Hotel Stewart, San Francisco, June 22-26, will enable all those interested in better anesthesia to advance the specialty of their choice.

Aside from the usual scientific sessions devoted to exceptional papers on research and clinical phases of anesthesia, clinics will be held on Saturday and Tuesday morning of the meeting, and if possible some laboratory demonstrations will also be scheduled.

Membership in the several associations is open to all licensed and qualified members of the medical and dental professions, as well as research workers holding doctorates of similar standing, who are interested in advancing the specialty of anesthesia. If you wish to present a paper during the meeting, kindly notify one of the secretaries at once, giving title and a brief abstract so that it may be properly placed on the program. Membership applications will be sent on request.

The following details of the scientific program may be announced at this time:

The Section on Anesthesiology of the California State Medical Society will meet on Friday afternoon, June 22, and some of the papers to be presented will be:

The Anesthesia Situation in California (chairman's address). Edgar I. Leavitt, San Francisco.

The Effects of Posture on Relaxation Under Anesthesia. Caroline B. Palmer, San Francisco.

Reversing Anesthetic By-Effects Through Selective Medication. Lorulli A. Rethwilm, San Francisco.

Current Researches in Anesthesia. F. H. McMechan, Avon Lake, Ohio.

Pre- and Post-operative Care of Patients from the Anesthetist's Viewpoint. R. F. Hastreiter, Los Angeles.

On Friday evening there will be a special session on anesthesia in oral surgery and dentistry, to which the local specialists and dentists will be invited. The following papers will be presented:

Anesthesia for Oral Surgery with Special Reference to the Dangers and Advantages of the Beck-Mueller Apparatus. Walter R. Crane, Los Angeles.

General Anesthesia in Nose and Throat Surgery Hypodermically Administered. Isaac H. Jones, Los Angeles.

Pure Nitrous Oxide-Oxygen for Oral Surgery in the Upright Posture. E. I. McKesson, Toledo, Ohio.

Handling the Problem of Difficult Cases Under Nitrous Oxide-Oxygen Anesthesia for Oral Surgery and Dentistry. Leo Schuchard, San Francisco.

Selective Anesthesia for Plastic Surgery of the Mouth and Jaw. Edmund H. Kelly, Los Angeles.

Anesthesia clinics will be held at Lane Hospital, Stanford University on Saturday morning, June 23, under the chairmanship of Caroline B. Palmer.

It is expected that laboratory demonstrations of pertinent interest can be arranged for Saturday afternoon at the University of California Medical College.

A get-together social evening will be featured for the anesthetists and their ladies in attendance, at the Hotel Stewart on Saturday evening.

There will be a General Session on Monday morning, June 25, with a presentation of the following papers:

Address of Welcome. Saxton T. Pope, San Francisco.

Response. F. H. McMechan, Avon Lake, Ohio.

President's Address. Eleanor Seymour, Los Angeles.

Keeping Anesthetic Records and What They Show. John S. Lundy, Seattle, Wash.

Medico-Legal and Obstetrical Consideration of Scopolamin Anesthesia. R. E. House, Ferris, Texas.

Endocrinology in Relation to Anesthesia and Surgery. Henry R. Harrower, Glendale, Cal.

The Monday afternoon session will be devoted to a symposium on hazardous risk patients:

The Anesthetist as a Consultant on the Surgical Team (chairman's address). George P. Waller Jr., Los Angeles.

Anemia in Relation to Surgery and Anesthesia. W. H. Gilbert, Los Angeles.

Evaluation of Cardiac Reserve. Alfred Friedlander, Cincinnati, Ohio.

Shockless Hysterectomy. Charles T. Souther, Cincinnati, Ohio.

Shock from the Anesthetist's Viewpoint. Neil C. Trew, Los Angeles.

Anesthesia for Hazardous Brain Surgery Risks. Dorothy A. Wood, San Francisco.

The Goiter Risk and a Simplified Technique of Local Anesthesia. John Hunt, Seattle, Wash.

The annual dinner will be held at the Hotel Stewart on Monday evening, June 25, and will be enlivened with music and clever after-dinner speakers.

Anesthesia clinics will be held at the University of California and Children's Hospital on Tuesday morning under the chairmanship of Mary E. Botsford.

The Tuesday afternoon session will be devoted to a symposium on nitrous oxide-oxygen anesthesia, and the following papers will be presented:

Newer Concepts of Nitrous Oxide-Oxygen Anesthesia and Its Clinical Possibilities (chairman's address). E. I. McKesson, Toledo, Ohio.

Manufacture and Purity of Nitrous Oxide and Oxygen. Donald E. Baxter, Glendale, Cal.

Nitrous Oxide-Oxygen Anesthesia in Children. Mary E. Botsford, San Francisco.

Nitrous Oxide-Oxygen Anesthesia from the Surgeon's Viewpoint. Roland E. Skeel, Los Angeles.

Positive Pressure for Thoracic Surgery with Nitrous Oxide-Oxygen Anesthesia. Sterling Bunnell, San Francisco.

Therapeutic Value of Oxids of Nitrogen. W. H. Morse, Hartford, Conn.

Special railroad rates will be in effect, and all the transcontinental lines will co-operate with you in planning for special routes and sightseeing trips so that your attendance at this meeting can be made a most enjoyable event. Make your reservations at the Hotel Stewart at once to avoid disappointment.

The visiting ladies will be especially entertained, and details regarding the local social events and the annual dinner will be sent with the preliminary program.

The officers and committees of the several associations will do everything they can to make the San Francisco meeting a memorable one, and your attendance will amply repay you in every way.

For further information address

F. H. McMechan, M. D., secretary-treasurer American Anesthetists, Lake Shore Road, Avon Lake, Ohio.

Eleanor Seymour, M. D., secretary-treasurer Pacific Coast Anesthetists, 845 West Tenth street, Los Angeles, Calif.

Lorruli A. Rethwilm, M. D., secretary-treasurer California Anesthetists, 2217 Webster street, San Francisco, Calif.

THE PACIFIC NORTHWEST MEDICAL ASSOCIATION

The second session of this organization will meet in Seattle on June 19, 20, 21, 1923. The officers are: President, J. Earl Else, Portland, Ore.; president-elect, Homer D. Dudley, Seattle, Wash.; first vice-president, Alexander Monro, Vancouver, B. C.; second vice-president, J. E. Tyree, Salt Lake City, Utah; secretary-treasurer, Fredrick Epplen, Spokane, Wash. A special scientific program is being made up from selected visiting men, well known in their specialties, and including some of the following subjects and speakers: "Syphilis, Cutaneous Lesions, Diagnosis and Treatment," by Oliver S. Ormsby; "A Consideration of the Pathogenesis of Cholecystitis and Its Complications," and "Intra-cardiac Surgery," by Evarts A. Graham of Washington University. Peter Bassoe of Chicago will present a paper on "Skeletal Lesions Causing Spinal Cord Symptoms"; the surgical phase of the same subject will be handled by D. B. Phemister of Chicago. Warfield T. Longcope of Baltimore will speak on "Certain Phases of Protein Sensitization," and will give a second lecture on "Practical Value of Functional Tests for Kidney Efficiency in the Diagnosis, Prognosis, and Treatment of Nephritis." "Diabetes" will be handled in two lectures by R. T. Woodyatt of Chicago. Dean Lewis will discuss "Treatment of Fractures" in one paper, and "Lesions of the Breast" in another. Channing Frothingham of Boston will present two papers: one on "Abnormalities in Cardiac Rate and Rhythm and their Treatment," and another on "Visceral Syphilis." Carl Hedblom of Rochester (Minn.) will discuss the subject of "Chronic Empyema," and "Treatment of Chronic Non-tuberculous Suppuration of the Lungs." Francis W. Peabody of Boston will have two papers: one on "Clinical Significance of the Vital Capacity of the Lungs," and the second on "Cardiac Neuroses." A. J. Carlson of Chicago will discuss in his first paper "Physiology of the Alimentary Tract"; in his second, "Studies on the Visceral Sensory Nervous System"; and in the third, "Present Status of Organotherapy." E. E. Irons of Chicago will have as his subject, "Chronic Infections as a Cause of Invalidism." Gordon B. New of Rochester (Minn.) will read a paper on "Actinomycosis of the Head and Neck," and a second paper on "Plastic Surgery of the Face and Neck." H. F. Helmholtz of Rochester (Minn.) will give two papers: one on "Asthmatic Bronchitis in Childhood," and another on "Pyelitis in Children." W. W. Duke of Kansas City will present the subject of "Food Allergy as a Cause of Abdominal Pain."

The program is not yet complete, and there will be a number of additional papers by other men. The Association is working on a plan to have a special boat or special train provided to carry visitors and friends to the American Medical Association Convention in San Francisco, which opens four days after the close of the Seattle medical meeting. The program of the second session of the Pacific Northwest Medical Association is an ambitious one, but judging from the success of a somewhat similar program at their first meeting last year, the convention gives every promise of being very much worthwhile; in fact, it is a real period of post-graduate instruction in some of the current scientific problems of medicine.

What Is Medical Art—"What is the honest truth about the medical art? That by far the largest number of diseases which physicians are called to treat will get well at any rate, even in spite of reasonably bad treatment. That of the other fraction, a certain number will inevitably die, whatever is done. That there remains a small margin of cases where the life of the patient depends on the skill of the physician. That drugs now and then save life; that they often shorten disease and remove symptoms; but that they are second in importance to food, air, temperature, and the other hygienic influences."—Oliver Wendell Holmes.

Not Size That Counts—A doctor friend told me recently that he felt cramped in a hospital which housed only eight hundred beds. But Boerhaave changed all European medicine with but twelve; Corrigan rewrote the chapter on heart disease with but six, and Kulz whose work fills one-third of all the tomes on diabetes had just two patients. Could any practitioner have less?—Martin H. Fischer, M. D., The American Medical Press, January, 1923.

Nevada State Medical Association

Nevada Medical Bulletin, Feb. 15, 1923—We still continue to run behind our publication date, but it helps to give a little later legislative news. The Sheppard-Towner Act was accepted by our legislators with only five dissenting votes, and we will now proceed to spend a lot of the people's money on a lay organization that will usurp the duties of the medical profession by passing out Government tracts, and giving needy women and children advice. In the meantime the bill to authorize the establishment of public hospitals, in the various counties that desire one, is languishing in committee and no one seems to know when it will come up. If our legislators can pass the S-T bills so blithely at the behest of a few interested leaders of women's clubs, aided by subsidized labor organizations, they should not hesitate to pass this measure which will provide some real relief to all the sufferers of the State. However, it seems to be rather a popular idea at Carson that when the medical profession takes sides on any bill that we are doing it for purely selfish reasons, and some of the folks down there take great pleasure in alluding to the N. S. M. A. as "The medical trust." The only "Trust" we can see about it is that we trust too many people for fees that we never get, and it is about time that we tighten up a little. Wonder what the lay director of the S-T propaganda, and the nurses employed, would do if the physicians were to refuse to help them out of the difficulties they will get into. And still some of the proponents of that bill took pleasure in intimating that the doctors are incompetent and that they form the "Medical trust."

We need to look after our own interests a little more, and the way to do it is by organization. That is the way our enemies get what they want, so why not try to get every eligible physician to join our State association. We regret to state that there are two or three of our old, and valued, members who have completely overlooked the fact that they have not paid dues for some time. Our annual report must go to the A. M. A. early in March, so if you know yourself to be in arrears try to let us hear from you at once. We admit a little grouch this time, but we will try to cheer up before writing the next number. When shall we meet, June or October?

Nevada Medical Bulletin, March 1, 1923—The repeal of the State Prohibition Acts and the adoption of the Volstead Law as the law of Nevada confers upon us the right to prescribe whisky, but you must secure a government permit, if you wish to do so, and your druggist must also have a permit before he can fill your prescriptions. We are also permitted to have six quarts of whisky each year for use in office practice. We are glad that the physicians and residents of Nevada now have the same privileges enjoyed by those of other States, but let us not forget that we are physicians and not bootleggers—and let it not be said that any member of this association has had his permit revoked because of unlawful prescribing. We anticipate that there will be a regular epidemic of snake bites, influenza, "threatened" pneumonia, general debility, and other distressing complaints for which the patients will not only wish to make the diagnosis but will desire to dictate the prescription as well, but don't let them get away with it. You have been making diagnoses and doing the prescribing for some time now, and there is no reason why you should not continue to do so, even though

certain patients may leave your office with a look of pained disgust when you have given them a prescription for a dose of calomel, and some pills, instead of the "pint" they so confidently expected. We have had quite a number of letters and cards about the time for holding the annual meeting, and so far it is about three to one in favor of October. If you have not sent in a card, we would like to hear from you as we want to do what the majority desires. If we can have another meeting like the one last year we will be very well satisfied, as we have so far failed to find any one that will say that he ever attended a better medical meeting anywhere. The scientific program was one that any organization could well be proud of, and when it comes to entertainment we will put our committee up against the world. And if you don't believe us ask California and Utah. See if you have a 1923 membership card in the front window of your card case, and if you haven't you had better send in a fiver and be happy the rest of the year.

Representation in the House of Delegates—When a medical society is organized, all of its members assume certain definite obligations with respect to the support of the society in all of its activities. In the scheme of medical organization which now is in operation in the United States, one outstanding purpose which runs prominently throughout the whole plan is that democratic principles shall prevail. Representation in all of the legislative and business bodies of the various societies is based on numbers and is determined, in all instances, by the votes of the members themselves. It is a necessary assumption that all the members of a society will remember to live up to their obligations, one of the most important of which is that all shall participate in organizational affairs and in the selection of those who are to represent the membership in determining policies, and in putting these policies into execution.

Every component county medical society is entitled to at least one delegate in the house of delegates of the State association of which it is a component unit. Every delegate elected by a component county society to represent it in the house of delegates of the constituent State association is charged with a very responsible duty, and should make every possible effort to present himself for service in that house of delegates. Every constituent State medical association in the United States is entitled to at least one delegate in the House of Delegates of the American Medical Association. By action of that House of Delegates, each of the Sections of the Scientific Assembly of the American Medical Association, the Medical Corps of the United States Army, the Medical Corps of the United States Navy, and the United States Public Health Service are entitled to one delegate each.—American Medical Association Bulletin, February 15, 1923.

Naturopaths May Prescribe Whisky—It is reported in news dispatches that the State Appellate Court of California has held that naturopaths are "physicians and surgeons," and in view of this decision the prohibition officers have ruled that they have the right to obtain whisky prescription-books. It is reported that Harry Encell, attorney for the State Medical Examiners, agrees with the opinion of W. J. Gloria, legal adviser of the State Prohibition Department, that legally naturopaths can prescribe whisky. The story of how naturopaths in California became licensed as "physicians and surgeons" makes interesting reading, but is too long to tell here. If these inadequately educated drugless practitioners can be authorized by law to prescribe whisky, what is to prevent them from being authorized to prescribe narcotics? Isn't it a fair question to ask how many, if any, are now licensed to prescribe dangerous narcotics and other drugs under their license as "physician and surgeon"?

BOOK REVIEWS

Symptoms of Visceral Disease. A study of the negative nervous system in its relationship to clinical medicine. By Francis Marion Pottenger. 2nd ed. 357 pp. Illustrated. St. Louis: C. V. Mosby Company. 1922.

It is a distinct compliment to the medical profession, as well as to the author, that this thoughtful monograph should appear in a second edition so soon after its original publication; for on the one hand it demonstrates the alertness of clinicians in appreciating a superior work that is not of the stereotyped text-book variety; and again it proves that the author successfully "put over" his message. The emphasis throughout has been laid on the functional physiologic study of disease pictures, rather than on the static anatomic pathologic aspect. The influence of the incretions (ductless gland secretions), upon the vegetative nerves, and their power to modify nerve reflexes is stressed and adequately presented in the light of present knowledge. The profound effect of psychical states in initiating and altering symptoms is also given proper recognition and importance.

That a clinician, distinguished in a specialty, should retain such a broad medical horizon, and contribute so valuably to general medicine, is worthy of special comment. This book is the result of his experience in practice—that the human body is a unit, and that one part is rarely diseased without affecting other parts. It is an eloquent rejoinder to those who have been much perturbed about overspecialization in medical practice. Out of an intensive study and extensive experience in a narrow field, the author has been able to achieve a broader outlook on medicine as a whole. The book can be warmly recommended to all practitioners who wish to understand more intelligently the whys and wherefores of the symptoms they daily encounter. H. L.

Diseases of Women. By Harry Sturgeon Crossen, M.D., F.A.C.S. 5th ed. Revised and enlarged. 1005 pp. Illustrated. St. Louis: C. V. Mosby Company. 1922. Price, \$10.

The fifth edition of this remarkable book has appeared. The mere fact that five editions had to be published in a comparatively short time makes it unnecessary to again speak of the enthusiasm with which this book has been received by physicians. Its clearness in organization, the great number of good illustrations, and its readable English make it a book equally valuable to the student, the practitioner, and the teacher.

The new edition gives the latest information in advanced diagnostic methods, among which the chapter on the determination of the patency of the fallopian tubes and the X-ray studies of the pelvic viscera, with the aid of gas insufflation by way of the tubes, marks the outstanding feature. Advances in X-ray and radium therapy are fully discussed. The latest interpretation of the physiological and pathological changes of the endometrium are brought before us, and will greatly help in eliminating many diagnostic errors. Many discussions on treatment have been augmented. The trend toward conservatism in treatment of inflammatory diseases of the generative organs is emphasized. The newest views on endocrine disturbances and their treatment have been condensed into a readable form so that the average practitioner can approach this problem in an intelligent manner.

Dr. Crossen must be congratulated for his unflagging enthusiasm in keeping his book up to date.

L. A. E.

BOOKS RECEIVED

How to Resist Disease, an Introduction to Immunity (Lippincott's Nursing Manuals). By Jean Broadhurst, Ph.D., Assistant Professor of Biology, Teachers College, Columbia University. 138 illustrations and 4 color plates. Philadelphia and London: J. B. Lippincott Company. 1923.

Physics and Chemistry for Nurses (Lippincott's Nursing Manuals). By A. R. Bliss Jr., M.D., and A. H. Olive, Ph.Ch., Phm.D. 70 illustrations. Third edition, revised and rewritten and conforming to the requirements of the Standard Curriculum (1922) of the National League of Nursing Education. Philadelphia and London: J. B. Lippincott Company.

Essentials of Surgery (Lippincott's Nursing Manuals), a text-book of surgery for student and graduate nurses and for those interested in the care of the sick. By Archibald Leete McDonald, M.D., The Johns Hopkins University. 49 illustrations. Second edition revised. Philadelphia and London: J. B. Lippincott Company.

Text-book of Anatomy and Physiology, for Training Schools and other Educational Institutions. By Elizabeth R. Bundt, M.D., Formerly Adjunct Professor of Anatomy in the Women's Medical College of Pennsylvania, and Superintendent of Connecticut Training School for Nurses, New Haven, etc. Fifth Edition Revised and Enlarged by Martha Tracy, M.D., and Grace Watson, R.N. 266 illustrations, 46 of which are printed in colors. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut street.

Text-book of Ophthalmology. By Hofrat Ernst Fuchs, Former Professor of Ophthalmology in the University of Vienna, translated by Alexander Duane, M.D., Surgeon Emeritus, Knapp Memorial Hospital, New York. 455 illustrations. Philadelphia and London: J. B. Lippincott Company.

Nursing and Nursing Education in the United States. Report of the Committee for the Study of Nursing Education and Report of a Survey by Josephine Goldmark, Secretary. New York: The Macmillan Company. 1923.

Monographs on Experimental Biology; Labyrinth and Equilibrium. By Samuel Steen Maxwell, Ph.D., Professor of Physiology in the University of California. Illustrated. Philadelphia and London: J. B. Lippincott Company.

Let Us Not Forget Fundamentals—The true purpose of America, its salvation and that of all its citizens, is in the promoting of the more abundant life of all through service by all and by the state itself of those ideals of truth and beauty, of chivalry and love and loyalty, in which all human life consists. This seems in form a double purpose, but in essence it is really one. It has been best expressed in the two commandments in which the teaching of the New Testament is summed up: "And thou shalt love the Lord thy God with all thy heart, and with all thy soul, and with all thy mind, and with all thy strength." This is the first commandment.

And the second is like unto it, namely this: "Thou shalt love thy neighbor as thyself."—Joseph Lee, The Survey, February 1, 1923.

REPUTATION

"The man who builds and the man who buys are both beneficiaries of a good reputation. To the one it is a continuous spur and an incentive, to the other the strongest of all guarantees that what he buys is worthy. We sometimes speak of winning a reputation as though that were the final goal. The truth is contrary to this. Reputation is a reward, to be sure, but it is really the beginning, not the end of endeavor. It should not be the signal for a let-down, but, rather, a reminder that the standards which won recognition can never again be lowered. From him who gives much, much is forever after expected. Reputation is never completely earned; it is always being earned. It is reward, but in a much more profound sense it is a continuing responsibility. That which is mediocre may deteriorate and no great harm be done. That which has been accorded a good reputation is forever forbidden to drop below its own best. It must ceaselessly strive for higher standards. If your name means much to your public, you are doubly bound to keep faith. You have formed a habit of high aspiration which you cannot abandon, and out of that habit created a reputation which you dare not disown without drawing down disaster. There is an iron tyranny which compels men who do good work to go on doing good work. The name of that beneficent tyranny is reputation. There is an inflexible law which binds men who build well, to go on building well. The name of that benevolent law is reputation. There is an insurance which infallibly protects those whose reason for buying is that they believe in a thing and in its maker. The name of that kindly insurance is reputation. Choose without fear that which the generality of men join you in approving. There is no higher incentive in human endeavor than the reward of reputation, and no greater responsibility than the responsibility which reputation compels all of us to assume. Out of that reward and out of that responsibility come the very best of which the heart and mind and soul of man are capable."

The above splendid interpretation of the responsibilities of reputation, written by Mr. McCauley, the president of a well-known automobile firm, may well be applied definitely to the medical profession. This is presented to the physicians of America by the Dermatological Research Laboratories, as the sentiment which inspired its founders to manufacture the best possible products, and which stimulates its present directors to the constant improvement of D. R. L. arsphenamine and neo-arsphenamine.

 Obituary

THEODORA TIFFEE PURKITT,

Born July 12, 1856—Died February 8, 1923

Dr. Purkitt of Willows passed away at the home of her daughter, Mrs. Charles F. Lambert, February 8, 1923, of angina pectoris. Dr. Purkitt was the daughter of John R. Tiffée, one of the Argonauts of '49. She was married to George H. Purkitt of Sacramento in 1873. She received her Doctor of Medicine degree from Cooper Medical College, San Francisco, in 1894. Dr. Purkitt was a Fellow of the American Medical Association, a member of the California Medical Association, and the Glenn County Medical Society.

Surviving Dr. Purkitt are two sons and three daughters: Claude F. Purkitt, Superior Judge of Glenn County; Theodore Tiffée Purkitt, druggist of Woodland; Mrs. F. E. Knight of Willows; Mrs. C. F. Lambert of Willows, and Mrs. Georgia P. Henley of Sacramento.

NEW MEMBERS

Fresno—Otto P. Diederich, Allison A. Callaway.
Glendale—F. M. Rossiter.

Georgetown—Claude C. Tucker.

Lemoore—Ephraim S. Garrett.

Los Angeles—P. A. Foster, W. R. Franklin, J. Peachy Jones, Elmer W. Little, Milton Silver, J. M. Threadgill, L. A. Aleson, H. K. Bonn, Harry V. Brown, G. Lawrence Chaffin, Fred B. Clarke, E. L. Armstrong, Richard O. Bullis, James L. Chapman, R. A. Woodhull, W. L. Winnard, Richard J. Flammson, William H. Leake, Daniel D. Lucey, Clyde V. Nelson.

Pasadena—George Dock, William Fred Cornett.

Sacramento—Bernard J. Rea, George E. Chappell, Edwin F. Patton.

San Diego—Salmon B. Axtell, Edw. A. Blondin, Horace G. Lazelle.

San Francisco—Fred Firestone, Martin J. Seid, Russell F. Rypins, G. A. Trueman, William J. Jackson,

San Mateo—George W. Sevenman.

Santa Ana—E. M. Beasley, E. G. Motley, H. G. Huffman.

Sutter Creek—John J. Klick.

Talmage—Donald R. Smith.

Wilmington—G. O. Shirey.

DEATHS

Daniels, Asa W. Died at Pomona, February 27, 1923, age 94. Graduate of the Medical College of Ohio, Cincinnati, 1867. He has been a resident of Pomona for the past twenty-one years, and was formerly a prominent physician of St. Peter, Minn. He was a member of the American Medical Association.

Harley, Elmer. Died at Monrovia, January 28, 1923, age 46. He was a graduate of the University of Colorado School of Medicine, Denver, 1914. Licensed in California in 1915. Dr. Harley was a member of the Imperial County Medical Society, State Medical Society, and the American Medical Association.

Humfreville, Daniel L. Died at Los Angeles, February, 1923. Graduate of Rush Medical College, Chicago, 1896. Licensed in California in 1914. He was a member of the Los Angeles County Medical Society, the State Medical Society, and the American Medical Association.

Poore, James E. Died at Sacramento, January 21, 1923, age 69. Graduate of Jenner Medical College, Chicago. Licensed in California in 1901. Dr. Poore was a member of the American Medical Association.

Pyle, Henry G. Died at Long Beach, January 15, 1923, age 57. Graduate of Cleveland University of Medicine and Surgery, 1894. He was a member of the American Medical Association.

Scott, William G. Died at Los Angeles, February 26, 1923, age 85. Graduate of the Cincinnati College of Medicine and Surgery, 1862. Licensed in California in 1892. He retired from practice in 1913. Dr. Scott was a member of the American Medical Association.

McCurtaín, Addison. Died at Los Angeles, February 21, 1923, age 65. Graduate of Louisville Medical College, 1881, and the Bennett Medical College, Chicago, 1884. Dr. McCurtaín, who was a retired physician, came to Los Angeles from Salt Lake City two years ago. He was a member of the American Medical Association.

California State Journal of Medicine

OWNED AND PUBLISHED MONTHLY BY THE MEDICAL SOCIETY OF THE STATE OF CALIFORNIA

BALBOA BUILDING, SECOND AND MARKET STREETS, SAN FRANCISCO

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VOL. XXI

MAY, 1923

No. 5

ORIGINAL ARTICLES

RESPONSIBILITY FOR STATEMENTS AND CONCLUSIONS IN ORIGINAL ARTICLES

The author of an article appearing in the JOURNAL is entirely responsible for all statements and conclusions. These may or may not be in harmony with the views of the editorial staff. Furthermore, authors are largely responsible for the language and method of presenting their subjects. All manuscripts will be carefully read, but editorial privileges will be exercised only to a very limited extent. It is believed that the manner of presentation of any subject by any author determines to no small degree the value of his conclusions. Therefore, both the author and the reader, in our opinion, are entitled to have the subject as presented by the author as little disturbed as possible by the editors. However, the right to reduce or reject any article is always reserved.

PYELOGRAPHY: COMMON DIAGNOSTIC ERRORS *

By MILEY B. WESSON

Instructor in Urology, The University of California, San Francisco

INTRODUCTION

The object of this paper is to call attention to the ease with which mistakes in interpretation of renal roentgenograms can be made, and how by complete systematic examinations they can be avoided. For the material used I am under obligations to the departments of roentgenology of the Stanford University Hospital, University of California Hospital, Letterman General Hospital, U. S. Marine Hospital, U. S. Navy Hospital (Mare Island), and to Drs. Hinman, Hartmann, Mathe, Stevens, Player, Kreutzmann, and Raymond.

Urology has become a very attractive specialty, because of the accuracy of diagnosis. This is due to the routine systematic examinations made, and the many checks upon the investigations. One of the most valuable procedures is that of pyelography.

This was first advocated by Voelcker and von Lichtenberg¹ in 1906, popularized in the United States by Braasch² in 1910, and introduced into England by Thomson Walker³ in 1911. Unfortunately, whenever a new diagnostic or therapeutic measure is recommended by an authority it immediately comes into almost universal use by both specialist and general practitioner. Too often, it is regarded as a "miracle performer," and proven methods are for the time discarded. Pyelography is one of our most important diagnostic procedures, but cannot be depended upon alone, as the incorrect interpretation of pyelograms easily leads to unnecessary surgery.

Following the adoption of pyelography as a routine step in urological examinations, those who worked in the larger clinics gradually became familiar with the confusing types, as well as the typical normal cases; but unfortunately little has been published as to the exceptions and fine methods of differentiation in borderline cases. Braasch's "Pyelography"⁴ is the vade-mecum of the urologist, and, though it still remains the most important single contribution to the subject, it was a pioneer publication, stressing typical cases, and cannot be followed blindly, as great strides have been made in this field since its publication.

TECHNIQUE

In the early days of pyelography, numerous accidents and fatalities occurred due to the toxicity of the agents used, overdistention of the kidney pelvis,⁵ and infiltration of the kidney parenchyma.⁶ The three agents (sodium iodide,⁷ sodium bromide, and thorium nitrate), in common use at the present time, are, when properly used, non-toxic. However, accidents still occur because of the use of; (1) old resterilized solutions, (2) too concentrated solutions, and (3) overinjections, with tearing of the renal parenchyma.

It has long been known that the pressure of the blood in the capillaries varied from 20 to 55 mm. of mercury, and that when the intrapelvic pressure exceeded 60 mm. the secretion of urine ceased and filtration occurred in the reverse direction, the substances entering the blood at a fairly rapid rate.⁸ Injection by gravity is the method of choice, and

* Read before the San Francisco County Medical Society, October 31, 1922.

the height of the column should not exceed thirty inches.⁹ Syringes should never be used unless equipped with a manometer, either aneroid or mercury, for it is truly surprising how little force it takes to register 200 to 250 mm. on the gauge.¹⁰

Recently many operators have ceased the practice of taking double pyelograms because of untoward effects, but Hugh H. Young,¹¹ who uses only freshly prepared thorium and the gravity method of injection, takes them routinely—when there are no contra-indications—and without reactions.

A large proportion of the pyelograms and ureterograms made are valueless because of: (1) the incomplete filling of the kidney pelvis (Figs. 1, 2); and (2) to the splinting effect of the catheters which straightens out kinks and angulations and otherwise disguises the pathological condition (Fig. 3). When the catheter is passed it will normally meet with no obstruction (Figs. 4, 5) until at about twelve inches,¹² when it enters the upper calyx. Increased effort to pass the catheter further will cause it to double in either the bladder or the kidney pelvis (Figs. 6, 7), and, if great force is used, to be pushed into the kidney (Fig. 8). Before injecting the solution the catheter should be withdrawn one inch so as to pull the eye back into the pelvis, then withdrawn six inches and again injected, in order to obtain an ureterogram. If the injection is made before the catheter enters the pelvis there will be an excellent ureterogram, a poor pyelogram, and much pain; and if no injection is made below the uretero-pelvic juncture, ureteral diverticula (Fig. 9) will be missed.

Following the introduction of the opaque media, the musculature of the pelvis is very often thrown into a state of tonic spasm (Fig. 10) due either to the trauma of the catheter or the irritation of the solution. In such cases, since only a very small amount of the fluid enters, the operator is tempted to increase the pressure,¹³ with the result that the patient is made more uncomfortable and the pyelogram is always unsatisfactory and often shows a rupture of the pelvis with extravasation into the tissues (Figs. 11, 12, 13). The ideal method is to inject under fluoroscopic vision, so that the filling of the pelvis can be observed and the picture taken at the proper time.

STONES

The diagnosis of renal calculi is usually simple and spectacular, but after examining a large series of kidney plates and checking the various roentgenological reports with the case histories and operative findings, it is seen that some cases (Fig. 14) are almost impossible to diagnose even with all the data at our disposal. Unfortunately, a uniform routine for urological roentgenography has not come into general use, but it is universally agreed that the first picture taken should be a plain picture of the genito-urinary tract (Fig. 15), since if calculi are present they will fail to be shown in

only 9 per cent of the cases,¹⁴ whereas small pelvic stones and even staghorn calculi (Fig. 16) have been missed when the only picture taken was an injected one. Stereograms with the bismuth catheters are of help in ruling out phleboliths and calcified glands (Figs. 17, 18, 19, 32), but will cause confusion if there is a stone in a ureteral diverticulum or a double kidney with a stone in the posterior ureter (Fig. 20). Pyelograms and ureterograms are here necessary.

A plain picture will show the kidney outline in 90 per cent of the cases. The position of the stone in the kidney may be correctly localized by means of a pyelogram, since the shadow of a stone in the pelvis is completely or partially obliterated by the injected fluid (Fig. 21). However, if the stone has a phosphate center and an urate periphery (Fig. 22) it will appear as if separated from the shadowgraph fluid by a halo (Fig. 23) and may be confused with gall stones. Often a picture taken after the fluid has been drained off will show clearly a urate stone impregnated with the fluid, that did not show in the plain picture. The type of operation (nephrotomy) is indicated if an intrarenal pelvis is present; also the relation of a stone in the cortex to the kidney pelvis can be accurately determined. A fracture of the transverse processes of the spine with lateral dislocation of the fragments, so that they are in contact with the kidney cortex, will cause confusion, as do small circumscribed abscesses (Fig. 24). Small kidney stones are harmless, and it is a question whether a stone less than 1 cm. in diameter is surgical. By adopting a policy of watchful waiting, the stones either pass spontaneously or increase in size, and are easier found at operation. However, a large stone in an infected kidney tends to dilatation of the pelvis and pyonephrosis (Fig. 25), and demands immediate attention.

Stones in the lower ureter cause a dilatation below through inflammatory changes (Fig. 26), and above by mechanical dilatation (Fig. 27). A small spicule of bone attached to the pelvic brim, behind a dilated ureter, may be confused with a stone if the picture is taken so high as not to show the lower portion of the dilated ureter.

STRICTURES

Ureteral strictures (Fig. 28) and dilatations (Fig. 29) are important, but before an apparent constriction can be classed as a stricture it must appear in a number of plates. It has long been known that the urine trickled into the funnel portion of the pelvo-ureteral junction, and that peristaltic waves passing downward on an average of one every twenty seconds forced the urine onward, so that it spurted out at the lower end. These peristaltic constriction waves are easily demonstrated by fluoroscopy or when a series of pictures are made at short intervals after the pelvis has been filled with an opaque medium. Most reports of strictures are based on single plates; hence, the

skepticism with which the majority of urologists treat such diagnoses.

A pin-point ureteral orifice (Fig. 30) that causes intravesical ballooning of the lower end of the ureter at the time of the expulsion of urine is not rare, and is more commonly diagnosed with a cystoscope than by a ureterogram.

HYDRONEPHROSIS

Probably the most confusing pyelograms to interpret are those of early hydronephrosis. The errors are due to failure to recognize as normal the bizarre-shaped pelvis. All pelvises should be classified as normal that have a capacity of from 3 cc. to 12 cc., and whose secondary calyces terminate in delicate cup-like processes (Fig. 31). The ureter, as it passes upward, expands into a funnel-shaped structure which soon divides into two segments or major calyces.¹⁵ The upper oblique one carries on the line of the ureter, while the lower one branches off more or less horizontally. The oblique calyx is long and thin, often with a constriction in the middle, while the horizontal one is short and stumpy. Each primary calyx has opening into it calyces of the second order. Sometimes there is a third primary calyx, but this is really a large secondary calyx which opens into the horizontal calyx, occasionally into the bifurcation between the two primary calyces, or exceptionally into the oblique calyx. Writers generally describe the normal pelvis as being pyramidal in shape, and having three major calyces from which the minor arise.

The earliest evidence of hydronephrosis is a flattening and broadening of the delicate minor calyces; next, a broadening of the base of the calyces (Fig. 33) and an increase in size of the true pelvis, and finally all variations (Figs. 34, 35, 36) up to a rounded sac (Fig. 37). A large hydronephrotic kidney should be drained before injecting the opaque media, else it will be so diluted as to give only a faint outline. Since the walls are so thin as to rupture easily (Fig. 38), care should be taken neither to overinject, nor to take a vertical picture (Fig. 39), and to thoroughly drain the injecting fluid before withdrawing the catheter.

RENAL MOTILITY

At one time "floating kidney" was a common diagnosis, and the tendency was to regard as abnormal all low-lying kidneys. Now, definite objective evidence of a pathological lesion as the result of the renal excursion is generally necessary before operative interference is indicated.

Renal motility causes an intermittent distention of the pelvis with colic, but the obstruction is of such short duration as to never cause dilatation and hydronephrosis. Horizontal and vertical pictures are of value in determining the presence of a movable kidney. There is normally a certain amount of renal motility and, due to the angle at which viewed, kinks at the uretero-pelvic junction

often appear more acute than they really are. A common cause of this error in interpretation is the taking of the picture in the vertical position, with a catheter in situ. This acts as a splint, and the heavy filled pelvis and funnel-like upper end of ureter sagging down over it, makes a sharp kink (Fig. 3).

TUBERCULOSIS

In those early cases of renal tuberculosis, where there is a high total phthalein and the urine contains pus and no pyogenic organisms, pyelograms are of inestimable value, as they show characteristic erosions of one or more minor calyces with or without a dilatation of the major calyx. In advanced cases,¹⁶ plain pictures are most important because of the deposit of lime salts (Fig. 40) or calcium oxalate stones in the caseated areas (Figs. 41, 42). In such cases pyelograms (Fig. 43) are rarely necessary, as the added instrumentation is not justified and the diagnosis can be made from the presence of tubercle bacilli, pus, and diminished function. It is often impossible to catheterize late cases because of autonephrectomy.

TUMORS

In order to benefit the patient the diagnosis of renal tumor must be made before the classical symptoms of haematuria, tumor and pain are present, and here the pyelogram is of prime importance. The following changes are seen: (1) elongation of the renal pelvis; (2) distention or retraction of one or more calyces or of the whole pelvis; (3) filling defects of the whole pelvis caused by invasion of its lumen (Fig. 44); (4) rotation and abnormal position of an otherwise normal pelvis; (5) enlarged kidney shadow (Fig. 45); (6) overlapping of vertebrae by ureter. These changes are diagnostic, but not pathognomic as they are found in other conditions. Intra-abdominal tumors (Fig. 46) and adrenal tumors (Fig. 47) are particularly prone to cause confusion in diagnosis. Here, again, all of the facts elicited from a careful history and a complete examination are of importance in helping to interpret the pyelograms.

DISCUSSION

For years it has been taught that the most dangerous person in medicine is the "man with a curette," but he is harmless compared to the "amateur with a cystoscope." Pyelography is ordinarily a simple maneuver. The untoward results are due to a variety of causes, chief of which are: (1) passage of a cystoscope in a very old debilitated patient, (2) ureteral spasms and complete suppression of urine due to the trauma of passing the catheters, (3) use of toxic shadowgraph fluids, and (4) overinjection.

Our illustrations show well the futility of attempting to make a diagnosis by a pyelogram alone; a careful history and a systematic urological

examination practically always result in an accurate diagnosis.

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16. Staghorn calculus, easily confused with a pyelogram because of an artifact in the film, simulating a ureter.
17. Faceted stones in the kidney or calcified mesenteric lymph glands? A pyelogram would have cleared the diagnosis.
18. A calcified ovary, confused with vesical calculus.
19. Calcified mesenteric lymph glands simulating stones but differentiated by: (1) moving on respiration, and (2) not being obscured by the pyelogram.
20. Double ureter. Catheter is in anterior branch, excess of fluid flowed down to bifurcation at pelvic brim and up the posterior branch to second pelvis, obscuring a stone.
21. Calcified lymph gland, diagnosed renal stone because of poor pyelogram.
22. Kidney stone, showing half size in a plain picture as it has a phosphate center and a urate periphery (confirmed by chemical examination).
23. Pyelogram of same showing true size.
24. A "stone" in the kidney which at operation proved to be a small pyogenic cortical abscess.
25. Pyonephrosis, due to the presence of a stone in an infected kidney.
26. Ureteral stone with dilatation below, due to inflammatory changes in the ureter.
27. Pyelogram of same case made after removal of stone, by manipulative measures, showing renal destruction due to back pressure.
28. Coiled catheter with a stone; injection shows a stricture and the resultant hydroureter.
29. Left ureteritis. A cystogram showed small bladder and a dilated ureter. The only symptom was a pyuria. Following hydraulic distentions, the bladder dilated to 300 cc. and the ureter returned to normal size.
30. Stricture of ureteral orifice. Patient complained of "stomach trouble," pyuria was present and cystoscopy showed orifice of left ureter bulging into bladder and having the appearance of a tiny hole in the apex of a cone. The symptoms disappeared following dilations with a Garceau catheter.
31. Varieties of normal kidney pelvis.
32. Calcified lymph glands easily confused with renal and ureteral calculi.
33. Pyelogram of same. The symptoms were due to a movable kidney with a ureteral kink and a dilatation of the upper end of ureter, pelvis and calyces. The constricting band was cut and the kidney suspended; cure.
34. The position of the catheter indicates renal destruction.
35. Pyelogram of same (B. coli infection).
36. Specimen showing bridge of tissue that prevented shadowgraph fluid entering upper pole of kidney.
37. Hydronephrosis on one side and a staghorn calculus on the other.
38. Ruptured hydronephrosis: the patient entered a hospital for operation, and while being prepared he experienced a sharp pain in the abdomen—following a blow. A rupture of the hydronephrotic sac was suspected, this pyelogram was made, a nephrectomy was done, and the patient recovered.
39. Rupture of a hydronephrotic sac infected with the gas bacillus. By gravity, 60 cc. of fluid was injected; then the operator, becoming impatient, an additional 20 cc. was injected by means of a syringe and this picture obtained. The patient was then placed in the upright position, and the pyelogram showed that the lower pole of the kidney dropped to the pelvic brim. He immediately went into shock, and a pyelotomy was done to remove the thorium; complete suppression of urine persisted for five days. At autopsy the liver was found to be entirely destroyed and cultures showed B. capsulatis aerogenes. Ureteral specimen, taken before the injection of the kidney, showed the same organism.

LEGENDS

1. Incomplete pyelogram with abnormal course of catheter indicating renal destruction in a patient that had been reported cured of renal tuberculosis.
2. Same case with satisfactory pyelogram showing kidney to be normal; ureteral specimens sterile. The subjective symptoms and pyuria were due to an undiagnosed seminal vesiculitis.
3. Movable kidney. The pyelogram is normal in the prone position, but in the upright position the pelvis is only partially filled and the catheter, which was not sufficiently withdrawn, acted as a splint, making an apparent sharp kink.
4. Ureteral catheter kinked in a normal ureter.
5. Same case; catheter partially withdrawn in an attempt to straighten the kink.
6. Pyelogram showing catheter coiled in a normal pelvis (one year after nephropexy).
7. Catheter coiled in kidney pelvis—pyelogram.
8. Puncture of the renal parenchyma due to inserting ureteral catheter too far. The excess of the injecting fluid has partially filled the bladder and the wall has collapsed about the cystoscope beak, so that there appears to be a vesical perforation.
9. Ureteral diverticulum. This anomaly did not show in the pyelogram, but appeared in the ureterogram made when the catheter was withdrawn six inches and then injected.
10. Spasmodic contraction of the pelvis of an irritable overinjected kidney, with marked extravasation; later pyelograms normal.
11. Extravasation of sodium bromide into parenchyma due to overinjection by the syringe method.
12. Extravasation due to overinjection of an infected kidney by means of gravity, 40 inches pressure.
13. Extravasation due to overinjection by 75 inches of gravity pressure.
14. Diagnosed from plain picture, "residue of barium from a test meal"; following the passage of bismuth catheters, and a pyelogram it was thought to be a ureteral stone, but at operation only a ring of cartilage about the uretero-pelvic orifice was found.
15. A soldier returned from the Philippines because of "tuberculosis of the spine." Bilateral renal lithotomy was followed by a complete cure.
40. Tuberculosis of kidney with deposits of lime salts simulating stones.
41. Plain X-ray showed two stones lying below a fistula in the loin, that developed following a blow. A tentative diagnosis of a tuberculous abscess was made, and the fistula was injected with Beck's paste.
42. Same case. Pyelogram and ureterogram made by injecting fistula with Beck's paste. Nephrectomy; cure.
43. Tuberculosis of kidney; pyelogram shows bifid kidney pelvis simulating renal tumor.
44. Roentgenological diagnosis: "The sodium bromide outlines a small kidney pelvis with somewhat blunted calyces and a rather large ureter leading from it. There is a collection of sodium bromide below this which may be in a second kidney pelvis of very anomalous shape but which suggests extravasation of sodium bromide into the tissues or into the peritoneum outlining the colon." Exploratory laparotomy disclosed an inoperable renal tumor.
45. Solitary renal cyst containing 1500 cc., in an otherwise normal kidney.
46. Dermoid cyst of ileum compressing a normal kidney, so as to cause elongation of calyces and displacement of ureter.
47. Hypernephroma of the left suprarenal gland producing a deformity of the renal pelvis by pressure on the kidney.



Fig. 1

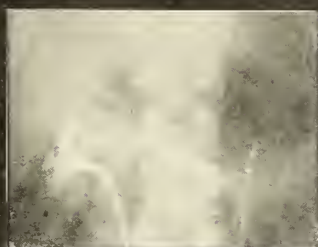


Fig. 2

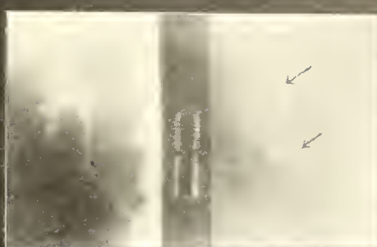


Fig. 3



Fig. 4



Fig. 5



Fig. 6



Fig. 7



Fig. 8



Fig. 9



Fig. 10



Fig. 11



Fig. 12



Fig. 13



Fig. 14



Fig. 15



Fig. 16



Fig. 17



Fig. 18



Fig. 19



Fig. 20

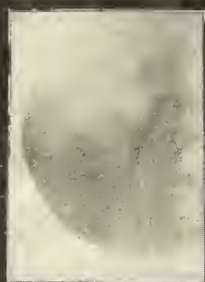


Fig. 21



Fig. 22



Fig. 23



Fig. 24

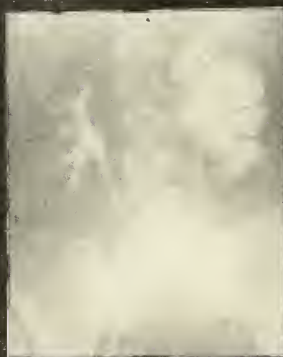


Fig. 25



Fig. 26



Fig. 27

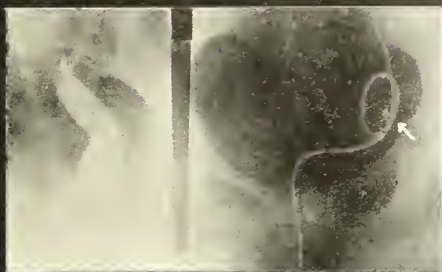


Fig. 28



Fig. 29



Fig. 30



Fig. 31

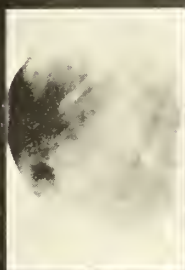


Fig. 32



Fig. 33



Fig. 34

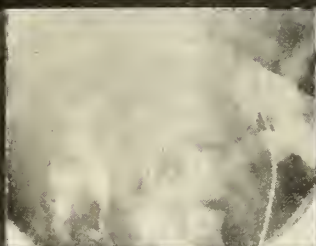


Fig. 35

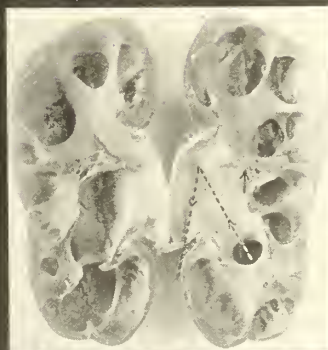


Fig. 36



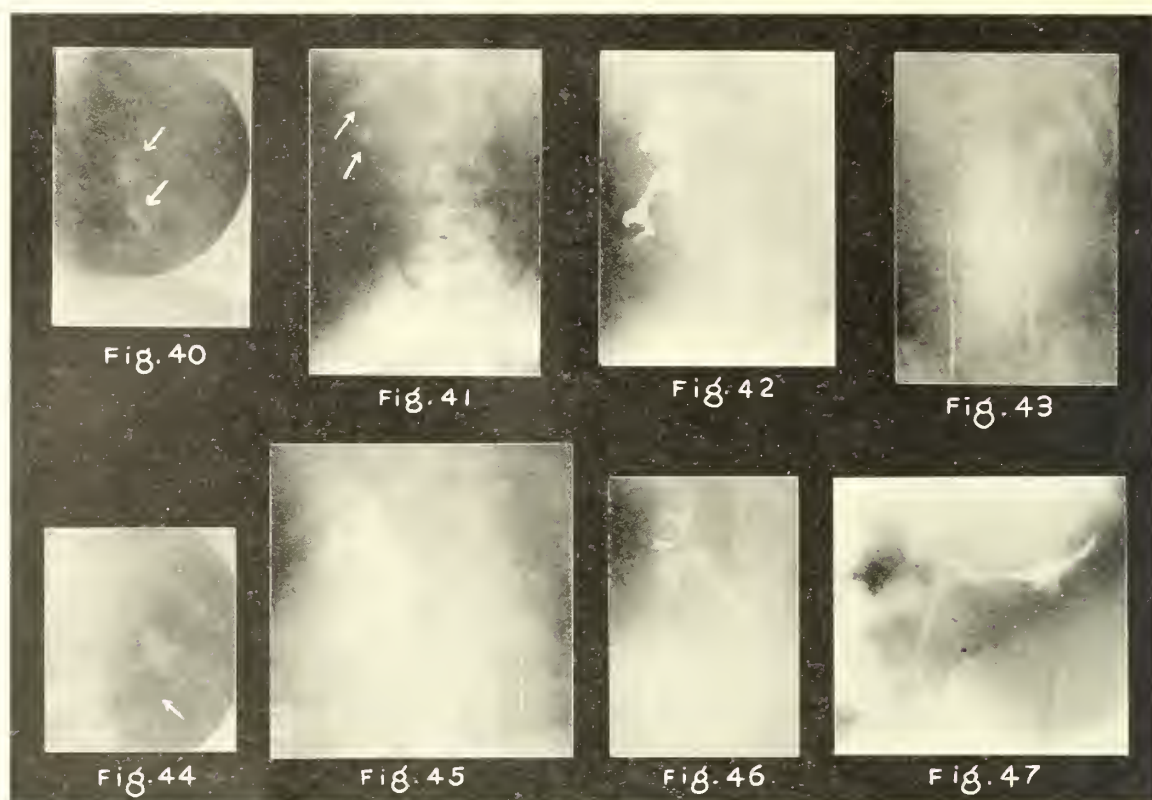
Fig. 37



Fig. 38



Fig. 39



A PRESSING EDUCATIONAL NEED

By ARTHUR W. MEYER, M. D., Stanford University

No state can, I presume, hope to be economically independent, although an empire in extent. Whether all elements needed for its economic life are found within its own confines is a matter of chance. This, however, is not the case with education. Whether or not a commonwealth meets all the educational needs of its people depends very largely upon the vigor, the foresight, and the enlightenment of its citizens. This should be self-evident and must hold for all save small or young states and for every educational need except perhaps certain very special aspects of education, science, and art.

Our democratic commonwealths early recognized their responsibility in regard to primary and secondary education, soon afterward in respect to higher education and later also to the professions of teaching and law. More recently still the advancement of learning received special attention and support, but strangely enough our public and our commonwealths have been slow to recognize the fact that nothing is more intimately related to public welfare, and nothing likely to promote the common good more than the furtherance of public health through the development of the medical sciences.

Even primitive man, of necessity, must have come to realize that health and happiness are intimately related. Among civilized peoples happiness depends upon very complex relationships and hence rarely is realized without good health. And next to honor, life itself, love of one's own and love

of truth, what could one value more deeply than health. Moreover, public health and public happiness are related even more intimately than personal health and personal happiness, for in public no man can live unto himself alone. A hermit may achieve personal happiness, but in community life no one is wholly unaffected by the acts and the physical condition of his neighbors. In view of this fact, the tardy recognition of *public* responsibility not only for public health, but also of its intimate dependence on personal health, seems surprising indeed.

It is now two generations since modern bacteriology began to reveal to us how diseases are conveyed from person to person. Previously, even contagious disease was regarded largely or wholly as a purely individual matter. Unfortunately there are some benighted individuals among us still who wish to regard it as such and continue to act as though there were no relation between public health and personal well-being. It is fortunate, however, that these individuals have been able to determine public policies regarding health only in certain small communities. In large communities such a decision would be calamitous indeed.

It was wise that our forefathers decided to leave religious education to private initiative, but it was unfortunate that the education of physicians and the care of the public health also rested there until very recently. The first complete medical course under State auspices, it seems, was offered by the University of Vermont in 1822. Virginia followed in 1827; Missouri in 1845, and Michigan

in 1850. But even at present only twenty-nine of our forty-eight States maintain medical schools under State auspices.

Some of our State schools supplanted private schools which had fallen behind the vanguard of progress or which needed assistance, others supplemented them. Of the remaining nineteen States which have no state-supported medical schools, many are so fortunate as to have strongly endowed private schools within their borders. This is true, for example, of the States of Maryland, Massachusetts, New York, and Pennsylvania. Others, such as Illinois, Missouri and Ohio, have both private and endowed schools. A few have no medical schools whatever, either because they are small or not sufficiently populous, or because they lie near large medical centers. Delaware, Nevada, and Rhode Island are examples. A few States which probably are able to do so have failed to assume their full responsibility as yet.

Our own State established a school of medicine as an integral part of its university in 1902. The population of California was about one and a half million at that time and its aggregate wealth approximated one and a half billion. At present the population of California is approximately three and a half million and its aggregate wealth four and a half billion dollars.

We have undertaken many large and important projects for the public good, but it may, I think, be justly said that we have not accepted our full responsibilities for medical education and public health. No one who realizes just what this implies can look complacently upon the present situation. No progressive citizen will decry the expenditure of millions for good roads, but what a contrast to these large sums is formed by the relatively small amount spent upon the education of our future physicians and guardians of public health, and upon the advancement of the medical sciences, upon which the success of both rests. If not the dignity, then surely the welfare of a commonwealth of three and a half million people, would seem to justify a more generous support. Good health concerns every citizen even more than good roads. A well man may muddle through. A sick man can't do even that and good roads do not profit a dead man.

I do not mention these things implying that the need for medical education primarily rests upon an economic or statistical basis. Aside from certain special aspects of disease the population of every State is large enough to present all the major problems of public health and hygiene and of medicine. The need for medical care varies directly with the size of a man's family and indirectly with his wealth.

Although there is no immediate exigency that must be met, the time is past when the Pacific Coast can continue to look so largely to the East for physicians and for the advancement of the medical sciences. Surely, this is not a re-echo of provincialism. A community of four million people should want to assume the burden that rightly is theirs and answer one of the primary needs of its people. This is the only self-respect-

ing and the only wise course, and surely nothing else is sound public policy.

With a population of five and a half million people, the Pacific Coast States have a total of 9677 registered physicians. This is one physician for every 575 inhabitants, a ratio somewhat in excess of that in the United States at large where it is one to every 656 inhabitants. But it must not be forgotten that the population of this coast is scattered very widely indeed, and that among the licensed physicians here there are a larger number who reside in this region largely, or wholly, for purposes other than medical practice.

The general mortality rate among physicians between the ages of twenty-five and sixty-five is estimated as sixteen per one thousand. Hence, the annual loss from death among physicians upon this Coast is 155. It, no doubt, is larger than this because of the composition of the medical profession here. Besides, to this number must be added the physicians required to answer the needs of growth in population. This is the greater demand, especially in these States, and it exceeds the loss from death at present. On the basis of the recent increase in population, about five hundred physicians would be required annually, in addition to those lost by death, in order to maintain the present ratio upon this Coast. Hence, the annual need of the Pacific States would seem to be approximately 655 physicians. Yet the one private and the two State medical schools within this area graduated only 104 students in 1920. This leaves an annual deficit of over 550, which must be met by physicians from other States. It is true that to a very small degree the above discrepancy is offset by young people from the Pacific States, who are being educated in medicine outside of this area, but this number necessarily is small and really quite negligible in connection with the total requirements of this Coast.

But it may be asked why should we assume a burden which other States now are carrying for us. Apart from considerations already presented, there is no reason. Any commonwealth may be as dependent as it chooses to be and we well might rest content, provided that we receive only well-trained physicians and that we can rely on getting the needed number in the future. As far as the first consideration is concerned, it may be frankly stated that most of the schools of medicine upon this Coast now afford better training than that given in many of the medical schools outside of this area. Moreover, it is well to remember that there is no reason why our schools should not move still nearer to the front in medical education if more liberally supported.

A short survey will help to answer the question whether, under present conditions, we can continue to receive an adequate supply of physicians from other States. The annual loss from death among physicians in the United States is estimated at 2329. Upon the basis of the annual increase in population during the last decade, 2286 more physicians are needed annually in order to supply the need of additions to the population. This makes a total of 4615. The grand total of

graduates in medicine in the United States was only 3047 in 1920, although it was 4440 in 1910. Hence, it is clear that unless other States and other agencies assume still larger responsibilities for medical education, that this Coast soon will be compelled to assume its own obligations. And surely no resolute people will take a chance with public health by shirking its duties toward medical education or deliberately decide to be permanently dependent upon the initiative and generosity of other States.

But it may be urged that we still have one physician for every 506 inhabitants in our own State. This is an excess of more than 20 per cent over that for the country at large. However, from 3 to 5 per cent of the physicians licensed in California really are not in active practice, and the alleged therapeutic fame of our climate brings us a large number of chronic invalids who considerably increase the demand for medical care. To a certain extent, I presume, the alleged lower general morbidity of the native population may counterbalance this effect, but there is no way in which this matter can be determined. The estimate which one obtains regarding it depends very largely upon the enthusiasm of the particular Californian consulted.

The estimated annual loss from death from California physicians is 108, but the increasing population alone requires 385 additional physicians yearly to maintain the present ratio. The number of graduates in the schools within the State, which maintain standards justifying recognition by the State Board of Medical Examiners, was only ninety in 1920. Hence, it is clear that, at present, California depends upon the generosity of private endowments or State efforts beyond her borders, to the extent of 403 physicians annually. However justifiable it may be at present, everyone will, I think, admit that for a permanent status this is no more desirable than it is creditable, to a large and prosperous commonwealth. The idea is not that we should have only physicians trained locally in medical practice within the State, but that our State must as soon as possible do its share in the training of physicians, as well as in the advancement of the medical sciences and assume its rightful educational burden.

Upon the basis of our present population, we should carry one-twenty-fifth of that national burden. We are carrying far less than this—less than one-fourth of this. Hence, it is fortunate that private agencies have considerably supplemented State effort in the past. This was done in part by institutions now defunct, and since 1909 also by Stanford University. Indeed, no matter how one regards it, the medical needs of the State of California, insofar as they were met intramurally, were to a considerable extent met, since 1909, by Stanford. In fact, from this date up to 1921 the graduates of Stanford, though not many, formed the majority of the combined graduates in medicine at California and Stanford. Stanford's share was over 55 per cent.

Were the University of California Medical School alone to meet the annual demand for physi-

cians in the entire State, it should graduate approximately four hundred physicians annually and have 1600 medical students. That number of graduates is approximately twenty times those graduated in 1920. Moreover, since our best endowed medical schools, such as Harvard and Johns Hopkins, graduate only about one hundred students each annually, and wisely limit their classes approximately to this number, the inability and perhaps also the inadvisability, of a single school meeting this needs seems clearly evident. Only one medical school in the United States graduates more than 170 students annually. Hence, even if our State could at once accept its full responsibility for medical education, and enlarged the facilities of our State medical school three or four times, there still would be ample room for another institution solely because of the constant need for physicians.

But there are other weighty reasons why a second institution, wholly independent of legislative aid, can be a distinct advantage. Anyone who even briefly surveys the history of education in the United States and examines the status of State schools cannot fail to be impressed by this fact. Although the State of Maryland is small, and although it is located in a portion of our country well provided with medical schools, it has recently been both declared and acknowledged by high authorities that it is best that two medical schools be maintained in the city of Baltimore. Certainly, if this be true for Maryland it must also be true for California. Here is an empire in extent with a much larger population and with more than comparable resources even today. But far more important still than these considerations is the undeniable fact that the educational and physical needs of the people of California are practically the same as those of the rest of the people of our entire country. If endowed medical schools have done much elsewhere in stimulating and arousing personal initiative and also in stimulating State schools besides contributing actively to medical progress, they also can do so here in California.

It is to be hoped that our people will generously support the medical school of our State University. Not to do so would be to jeopardize public health and seriously hamper medical progress. But it should not be forgotten that, so far as possible, Stanford makes California's peculiar problems her own and that she will always be ready to do whatever she may to further the best interests of our State and to help extend the many-sided activities of our great State University.

Stanford is proud of the fine accomplishments and of the splendid future which we know our State medical school could achieve alone. But there is some advantage in friendly rivalry and whole-hearted co-operation between a State and an endowed institution—between private and public initiative. We are all the more likely to realize high ideals under the stimulus of kindly suggestion and friendly criticism. The development through generous financial support, of both medical schools as well as of both Universities, is likely to be best

not only for the sake of medical education and of public health, but also for the State and Nation.

The task is more than enough for both institutions. Nor must it be overlooked that the position of our Pacific institutions is strategic and that the welfare of the entire country is best promoted by a general and equal development throughout its broad domain. Let us hope that philanthropic persons both within and without the State will gladly acknowledge that from the beginning Stanford has assisted very materially in carrying a large public burden, and that with the growth of population she must of necessity carry more. Such a role will not in the least restrict the activities of our State University. It is bound to promote rather than hinder its progress.

(Stanford University, January 26, 1923).

CONGENITAL ELEVATION OF THE SCAPULAE *

By ARTHUR L. FISHER, M. D., San Francisco

Congenital elevation of the scapulae is a rare deformity, as evidenced by the fact that there are but five cases reported in all six numbers of the quarterly index of medical literature. There has been but one case in the last few years in the Stanford out-patient department. Both the Stanford case and the one here reported showed somewhat similar conditions.

There are two types of elevated scapulae—one in which the scapula is pulled up apparently by muscular action only, and a second type in which there is a definite bony deformity that apparently changes the leverage of the muscles in such a way that the scapula is pulled upward. It is of this latter type that I wish particularly to speak.

In this form there is a bony bar that runs from the upper portion of the scapula to the posterior portion of the lower cervical vertebrae. A definite joint is formed at either end of this bar. This was the condition present in both cases referred to above. In endeavoring to find why such a bar is present, most naturally one looks back into the phylogenetic ancestry of the race. The only thing that seems at all likely to be the phylogenetic ancestor of this accessory piece of bone is a cartilaginous bar, which occupies a somewhat similar position in a special group of fishes; namely, the dipnoi.

In May, 1921, a boy, E. R., age two years, was brought to see me with the complaint of deformity of the left shoulder. The child had been a full-term child; had three older brothers and sisters well developed; no abnormalities in family; birth was normal; no instruments used; had a perfectly normal babyhood up to one year. There is a history of a fall at the age of one year. About

three months ago—that is, when the child was one year and nine months old—the parents began to notice that there was inequality in the shoulders.

On examination, the left scapula was definitely higher than the right and somewhat smaller than the right. The neck muscles on the left side seemed to be bunched. Motion in the scapulo-humero joint was not quite so free on the left side as on the right side. X-ray examination showed congenital elevation of the left scapula. The upper end of the shaft of the left humerus was expanded and showed an area of decreased density. This was somewhat irregular about the margins. This suggested a bone cyst with fracture into it, with callus formation. Lying behind the lateral mass of the fifth cervical vertebra on the left side, there was a smoothly outlined bone suggesting a cervical rib.

A few days later operation was undertaken, the operation consisting of two parts—first, removal of the accessory bar of bone; and second, a plastic on the muscles of the back below the scapula in order to hold it down. An incision was made over the bar which could easily be felt running from the upper inner angle of the scapula to the upper thoracic vertebrae. This bar was divided and most of it excised; the stump at either end being left to avoid too much mutilation, was covered in with soft tissue so as to prevent the regeneration of the bar. This wound was closed. A second incision was then made vertically between the spinus processes and the posterior border of the scapula. A V-shaped piece was then taken out of the trapezius in such a way that the base was at the border of the trapezius and the apex at about the fifth or sixth thoracic spine. A suture was then taken from the inferior angle of the scapula, taking in as much tissue as possible about the angle of the scapula, and carried down through the muscles and brought out through the skin at the region of the eleventh or twelfth thoracic spine. The needle was then reinserted at this point, and brought out again through the muscles at the angle of the scapula. This was a heavy suture and capable of withstanding a great deal of tension. It was tightened and the scapula thus brought downward and fixed in place. The V-shaped rent in the trapezius was then sutured as an additional measure to hold the scapula down. The scapula came down so readily that it was not necessary to do anything to the elevators of the scapula. The wound was then closed and the child's arm and thorax encased in plaster, in order to hold him quiet. He made an uneventful recovery and went back to his home in Mendocino County after about three weeks.

I have not seen the child since, but have heard from the parents that they are well satisfied with the result, and that the two shoulders are now very nearly alike.

Both parts of this operation have been done before, but, as far as I know, this is the first time that a complete operation has been done on one of these cases.

* Read before the Fifty-first Meeting of the California State Medical Society.

INSULIN TREATMENT OF DIABETES MELLITUS *

By ALBERT H. ROWE, M. D., M. S., Oakland, Calif.

Insulin has been selected by Banting and Best of Toronto University as the name of the extract of pancreas, which contains the active principle of the islands of Langerhans. The honor of first demonstrating the specific and complete control by insulin of fatal diabetes in dogs, and later of severe diabetes in man, and first elaborating the method of obtaining a stable, active, and non-irritating preparation of insulin, belongs primarily to Banting and Best, and secondarily to their advisers and co-workers, MacLeod, Collip, Fitzgerald, Henderson, Graham and certain others.

In the last few months several specialists in North America and England have been given the opportunity of using insulin in their severe cases of diabetes, and have been able to substantiate and reaffirm all the conclusions of the Toronto investigators. Thus, it is now certain that insulin is an absolute specific for diabetes mellitus and that it has taken its place for all time as one of the greatest discoveries in medical science.

A brief history of the researches which preceded the epoch-making ones of Banting and Best will be of interest. In 1889, Von Mering and Minkowski first established the etiology of diabetes mellitus by producing fatal diabetes after total pancreatectomy in dogs. Minkowski, Sandmeyer, and Pflüger then tried to control diabetes by the feeding of pancreas. Their attempts, as well as all other subsequent trials, have led to complete failure and even harmful results. At various intervals, Gley, Kleiner, Marlin, Paulesco, as well as others, have observed a reduction of blood and urinary sugar subsequent to intravenous injections of aqueous extract of fresh pancreas, but no stable extracts or constant results were ever recorded. Of definite importance was the work of Rennie and Fraser in 1907. They recognized the destructive action that the proteolytic ferments of the pancreas might have on its internal secretion, and thus tried feeding the islet tissue of teleostean fishes, which tissue is separate from the rest of the pancreas, but obtained negative results.

One outstanding clinical study was that of Zuelzer, in 1908. He extracted the pancreas with alcohol, dissolved the residue in salt solution and used this extract intravenously in six diabetics, with a remarkable control of glycosuria. Because of the tremendous protein reactions, this procedure unfortunately was never elaborated. In 1912, Scott again tried to destroy the proteolytic ferments by extracting pancreas with alcohol, but was unable to obtain any definite physiological effects.

During 1921, Banting and Best of Toronto undertook anew the problem of obtaining active pancreatic extracts. Their first inspiration gave them the idea of using pancreatic tissue in which the acinar structure had degenerated as a result of ligation of the ducts. The extracts thus obtained showed surprisingly constant reducing effects

on the hyperglycaemia and glycosuria of diabetic dogs. Searching for a larger supply of pancreatic tissue devoid of acinar cells, they learned of the work of Ibrahim, who had found no digestive secretions in the pancreatic glands of foetal calves under five months. Banting and Best first made extracts of such tissue with Ringer's solution and obtained a most potent and active product. This extract given daily by hypodermic enabled a totally diabetic dog to live seventy days, the average length of life previously recorded for such animals having been fourteen days. Alcohol was next tried as an extracting medium by Banting and Best, and they soon found that an active extract was able to be obtained from the pancreatic tissue of the adult ox. J. P. Collip then perfected a method of preparation of insulin from adult glands, which extract contained a minimum of protein, lipoids, and salts, and which could be injected hypodermically with little local reaction.

During the last year several articles have been published dealing with the activity of insulin. These articles have reported the remarkable lowering of the normal blood sugar in rabbits which occurs with insulin injections, the control by insulin of the hyperglycaemia produced artificially by piqûre puncture, adrenalin injections, ether anesthesia, and asphyxia, the elevation of the respiratory quotient in diabetic animals after the use of insulin, the storage of glycogen and the reduction of fat in the livers of diabetic animals, resulting from the use of insulin, and the remarkable excretion of ketones from blood and urine by the use of insulin.

The first article dealing with the clinical use of insulin in diabetes mellitus was published in March, 1922, in the Canadian Medical Journal, by Banting, Best, Collip, Campbell, and Fletcher. After observing its effect in seven cases of diabetes mellitus, they concluded that insulin could reduce the blood sugar to normal, abolish glycosuria, eradicate ketones from blood and urine, raise the respiratory quotient, and restore the health and strength of patients suffering with this disease. On January 6, 1923, a second clinical article appeared in the British Medical Journal by Banting, Campbell, and Fletcher entitled, "Further Experiences With Insulin in the Treatment of Diabetes Mellitus." The effects of insulin in fifty cases of severe diabetes were reported, and all the conclusions of the first clinical article of nearly a year before were confirmed. In addition, insulin was stated to be a specific in diabetic coma. Six out of ten cases of coma are recorded as having recovered as a result of insulin injections.

PERSONAL EXPERIENCES

In October of last year, I was granted permission by the diabetic committee of the University of Toronto, through Professor MacLeod, to manufacture insulin for use in my own severe cases. During November and December, through the work of three of my assistants and my own efforts, we were able to prepare a number of very potent extracts of pancreas, following the technic of Dr. Collip, with certain modifications suggested by

* Read before the Alameda County Medical Society, March 19, 1923.

Dr. Sansum of Santa Barbara. These extracts were all tested out on rabbits, and five of them, as shown in Table I, reduced the normal blood sugar level below .045 and produced convulsions and coma in rabbits, which condition invariably was relieved within a few minutes by the injection of glucose. Six of the nineteen preparations reduced the blood sugar to a point between .065 and .045. The other extracts in the doses administered did not depress the blood sugar enough to consider them potent according to the standards set by Banting, Best, Collip, MacLeod and Noble.

On November 17, 1922, the first case of severe diabetes was treated in my clinic, and we were able to keep this patient sugar-free for many days with one of our preparations. At this time, I was fortunately designated by the University of Toronto as one of the clinicians to receive iletin from Eli Lilly & Co. for experimental use in severe cases of diabetes, and since then practically all therapy has been carried out with iletin. We continued to manufacture insulin, however, during November and December in my clinic, since the supply received from Eli Lilly was inadequate at first for the cases which urgently needed treatment. In January, however, because of the remarkably stable, active, and carefully standardized product I was receiving from Lilly in amounts sufficient to meet our needs, we discontinued the preparation of insulin entirely. Great credit is due Dr. G. H. A. Clowes of the Lilly Co. for the excellent and dependable quality of insulin which his company has been able to produce, and this now in sufficient quantities to meet the needs of numerous clinics and specialists all over this country. During the first three months no charge was made by Lilly for the iletin we received, and during this period I had ample opportunity to corroborate the conclusions of other clinicians who were testing the effect of this extract.

During the last four months we have treated twenty-five patients with insulin, with very gratifying results. Certain data concerning twenty-three of these diabetics is contained in Table II. These records indicate the remarkable effect insulin has on the blood and urinary sugar, the ketonuria, and the general health, strength and weight of diabetics. Detailed reports of several of these cases of diabetes and of cases of coma which have been controlled and restored to health by insulin will be published later. At this time it is impossible to give the results of urinary ammonia determinations, CO_2 tensions in blood plasma, and the great number of blood sugar determinations which were found necessary to be made in the treatment of these severe diabetics, especially of those in acidosis or coma. It is also possible to record only the last doses of insulin and amounts of carbohydrates, proteins, and fat in the final diets at this time.

The general plan of instituting insulin treatment may be outlined: A careful history and physical examination is first made and urinary and blood sugar determinations are carried out. If the blood sugar is normal and the patient is

taking a two thousand calory diet, which contains not more than two or three times as much fat as available carbohydrate, there is no great indication for insulin treatment. At the start, great care must be taken to recognize the renal diabetics who continually excrete sugar in the urine, but have no increase of sugar in the blood, even after 100 grams of glucose have been taken by mouth. The charts of two young women with glycosuria and doubtful histories of true diabetes are published in this article, to show the blood-sugar curve of a case of renal diabetes and one of diabetes mellitus. If insulin had been given to the renal diabetic, we might easily have depressed the blood sugar to a point where convulsions and coma might have occurred. If true diabetics are unable to take enough calories to furnish energy for their work without hyperglycaemia, insulin is carefully administered, the dose and amount depending on the urinary and blood-sugar analyses. Each unit of iletin (Lilly) will burn from one to two grams of carbohydrate. The intervals between the hypodermics of insulin are best determined by blood sugar determinations taken several times during the day. These show the number of hours the dose of insulin depresses the blood-sugar curve. The most essential requisite from the patient's point of view is that he be able to accurately estimate the number of grams of carbohydrate, protein, and fat in his diet. This necessity is even greater with the use of insulin than when the disease was controlled by diet alone, and rigid dietary care must be continued as long as insulin is used. Special comments on certain cases in Table II follow:

A. C. was a diabetic with practically no tolerance at all. For one month she had been on the diet recorded without becoming sugar free. She was so weak that she was unable to walk up a short flight of stairs without breathlessness. After four months of treatment with insulin and on the diet recorded she has gained 34 pounds and feels perfectly well. R. F. is another case of a slightly less severe type. Both of these cases developed three years ago during pregnancy.

H. S., when first seen, was weak, thin, and suffering with advanced acidosis. Under insulin both sugar and ketones disappeared from the urine within six hours. She has gained twenty pounds and is in the best of physical condition.

O. L. has had diabetes for thirty years without complications. Suddenly two months ago without warning, gangrene began in his right foot and amputation of the big toe was followed by rapid extension of gangrene and fever. With insulin he was rapidly made sugar free, given an adequate carbohydrate and caloric intake and amputation was performed with gas and oxygen anaesthesia in two days because of the appearance of gas crepitus in his leg and a rise of temperature. He had no post-operative fever or rise of pulse and has remained sugar free continuously.

A. A. was in complete diabetic coma when first seen. She was unable to be aroused and had deep Kussmaul breathing. Large amounts of insulin were given during the first few days. For forty-eight hours nearly all fluids were given by vein. She became restless within seven hours and conscious within twenty-four hours. She then developed a right broncho-pneumonia with a temperature of 105 F, which lasted several days. In spite of this infection she made a complete recovery and three

weeks after entrance to the hospital was able to walk out. She is sugar free now on the recorded diet and insulin dosage and feels well.

D. E. is another case of advanced acidosis. All memory for the six days before admission to the hospital was absent. He was made sugar and acid free within twelve hours, and his blood sugar and CO₂ tension in blood plasma returned to normal within a few days with heavy insulin therapy.

R. M., a child of two years, referred by Dr. Langley Porter, was just going into deep diabetic coma when first seen. Over 20 units of insulin given within the first few hours made her sugar and acid free in her urine within six hours, and she has continued sugar free for many weeks on a good diet and little insulin.

Besides this last case of diabetes, we have under control six other cases of diabetes in children under eight years of age. As shown in Table II, three of these are on insulin treatment and are getting good results.

CONCLUSION

There is no doubt that insulin is one of the few specifics we have in medicine, and it completely fulfills the dream of physiologists and diabetic specialists. For those patients who will be steadfast to their diets and who will take insulin in proper doses, the outlook for health and freedom from diabetic complications is practically assured. Patients in coma, providing the circulation does not fail, can usually be restored to consciousness and gradually be brought back to strength and well-being by the use of insulin.

However, as shown in our records, delay in the recognition of severe acidosis and semi-coma is serious.

The importance of careful laboratory control by urinary and blood plasma analyses when insulin is to be used must be insisted on. To assure accuracy, these tests must be done by experienced chemists who have a large amount of such work continually at hand. The various alveolar air, blood, and urine tests for acidosis which were discussed by me in 1917 in an article in this Journal, must be available in the treatment of severe diabetics. The CO₂ tension in blood plasma is especially important.

Moreover, glycosuria due to renal diabetes must be recognized, and such patients with normal blood sugars ought not receive insulin. In true diabetes we can corroborate the conclusion of Banting and his associates that insulin will eradicate glycosuria and hyperglycaemia, eliminate the ketones from blood and urine, elevate the CO₂ tension in the blood plasma, and restore the physical well-being of patients.

Four cases of diabetes in children from the ages of two to eight years are being well controlled by insulin and dietary therapy.

(119 Thirteenth Street, Oakland.)

Note—My sincere thanks are due Prof. Fitzgerald of the University of Toronto, who has given his approval and generous counsel during the progress of my work with insulin.

TABLE I.
Effect of Insulin Preparations on Blood Sugar of Rabbits.

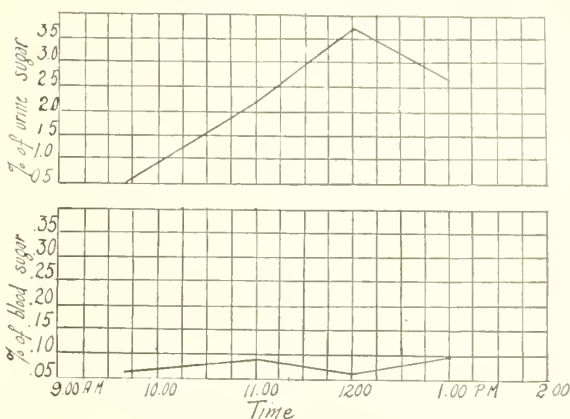
Insulin Preparation	Amount Injected	BLOOD SUGARS								Clinical Condition
		Original	1 1/2 Hrs.	2 Hrs.	2 1/2 Hrs.	3 Hrs.	3 1/4 Hrs.	4 Hrs.	4 1/4 Hrs.	
1	1 c.c.	0.113	0.087					0.065		Normal.
2	1 c.c.	0.126	0.054			0.039				Convulsions in 3 hours.
3	1 c.c.	0.13	0.048			0.043				Convulsions in 3 hours.
4	1/2 c.c.	0.153	0.120			0.095				Normal.
	2 c.c.	0.117	0.041							Weak, unable to walk.
5	1 c.c.	0.108			0.026					Normal.
6	1 c.c.	0.144		0.073		0.060				Weak in 1 1/4 hours.
7	1 1/2 c.c.	0.122	0.089			0.056				Weak, eyes protruding.
8	1 c.c.	0.110		0.01						Convulsions in 1 3/4 hours.
9	1 1/4 c.c.	0.111						0.052		Protruding eyes.
11	2 c.c.								0.05	Normal.
12	1 c.c.	0.08				0.05				Normal.
13	1 c.c.	0.12				0.059		0.045		Normal.
14	1 c.c.	0.12					0.072			Normal.
16	1 c.c.	0.11				0.11				Normal.
17	1 c.c.	0.13			0.06		0.03			Convulsions in 2 1/2 hours.
18	1 c.c.	0.18				0.11		0.08		Normal.
19	1 c.c.	0.08				0.09			0.10	Normal.

MRS. W. K.: AGE 31 YEARS—RENAL DIABETES

History—Sugar first noticed in urine four years ago. However, she was accepted by the New York Life Insurance Company one year later. Is now pregnant and sugar is constantly present, although there are no typical diabetic symptoms, or loss of strength or weight.

LABORATORY FINDINGS:

Date	Time	Condition	Urine Sugar	Blood Sugar
March 4			0.5%	
" 5				0.090%
" 7	7:30 A.M.		0.76	
" "	11:20 "		2.5	
" "	4:00 P.M.		2.1	
" "	8:30 "		1.4	
" 8	6:30 A.M.		0.4	0.072
" 12	9:40 "	Fasting	0.5	0.061
" "	11:00 "	1 hr. after 110 gms. glucose	2.21	0.087
" "	12:00 "	2 hrs. "	3.7	0.063
" "	1:00 P.M.	3 hrs. "	2.7	0.097



MRS. E. F.: Age 44 Years—DIABETES MELLITUS

History—Sugar in urine first noticed December 10, 1918. Has no typical diabetic symptoms and is free from sugar for months at a time.

LABORATORY FINDINGS:

Date	Time	Condition	Urine Sugar	Blood Sugar
March 12				0.152
" 14	11:00 A.M.	Fasting	0.3	0.180
" "	11:00 "	1 hr. after 110 gms. glucose	0.88	0.396
" "	12:00 "	2 hrs. "	2.4	0.512
" "	1:00 P.M.	3 hrs. "	3.7	0.279

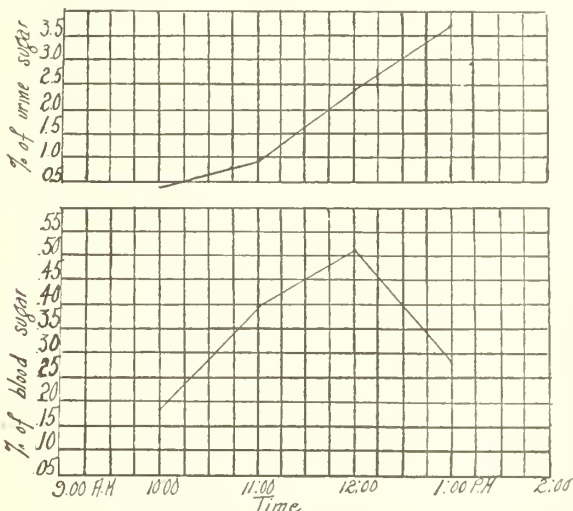


TABLE II.

Summary of Diabetic Cases Treated with Insulin.

Name	Sex	Age	Before and After Treatment	Diet in Grams			Insulin	Urinary Findings		Blood Sugar	Weight	Clinical Condition
				C H O	Prot.	Fat		Sugar	Diabetic			
A. C.	F	31	Before	3	32	20	0	+++	+++	0.37	91	Very weak.
			After 4 months	21	65	109	115-ac. B 110-ac. L & D	0	0	0.117	125	Marked increase in strength and health.
R. F.	F	31	Before	18	45	150	0	0.6	++	0.34	90½	Weak and depressed.
			After 3 months	40	52	150	110-ac. B. 16-ac. L & D	0	0	0.16	107½	Feeling fine.
H. S.	F	17	Before	Mod.	Limited	Limited	0	++	++	0.312	93	Ill and weak.
			After 3 months	24	52	145	110-ac. B. 18-ac. L & D	0	0	0.120	111½	Strong and well.
L. G.	F	27	Before	30	30	70	0	+	+	0.260	108	Weak. Unable to keep free.
			After 2 months	36	52	150	110-t.i.d.	0	0	0.120	115	Feels perfectly well.
A. C.	F	30	Before	12	36	138	0	+	++	0.326	109	Marked depression.
			After 1 month	21	42	135	16-t.i.d.	0	0	0.12	113	Unwilling to continue treatment.
E. R.	F	22	Before	Unlimited			0	48	0	0.230	94	Acute diabetes.
			After 2 months	24	64	142	13-b.i.d.	0	0	0.062	101	Weighs more than ever before.
L. M.	M	50	Before	12	60	93	0	+	0	0.198	182	Lacking in energy.
			After 1 month	21	70	150	16-t.i.d.	0	0	0.08	187	Stronger.

TABLE II—Continued.
Summary of Diabetic Cases Treated with Insulin—Continued.

Name	Sex	Age	Before and After Treatment	Diet in Grams			Insulin	Urinary Findings		Blood Sugar	Weight	Clinical Condition
				C H O	Prot.	Fat		Sugar	Diacetic			
S. F.	F	50	Before	12	36	120	0	0	+	0.155	94	Probably on too low diet. Weak, nervous.
			After 3 months	66	60	180	12-t.i.d.	0	0	0.130	102	Strong and well.
J. J.	F	43	Before	6	45	60	0	+	+	0.270		
			After 2 weeks	24	54	150	13-t.i.d.	0	0	0.101		Unwilling to continue treatment.
R. C.	F	33	Before	20	40	80	0	0	0	0.220	100½	Sugar with increase of diet.
			After 4 weeks	20	50	100	15-b.i.d.	0	0	0.120	106	Feels stronger.
W. B.	M	66	Before	Mod.	Limited	Limited	0	1.9	0	0.353	141	Weak. Recent loss of weight.
			After 3 weeks	75	72	150	110-t.i.d.	0	0	0.083	151	Stronger
O. L.	M	73	Before	Slightly	limited		0	3.8	0	0.277	Increase in weight	Gangrene of foot, daily temperature. Sugar-free in 12 hrs. Amputation in mid thigh in 2 days. No temperature after surgery. Left hospital in 10 days.
			After 2 weeks	60	45	150	110-ac. B & L 18-ac. D.	0	0	0.108		
C. S.	M	67	Before	Unlimited			0	2.1	0	0.370	Feels increase	Typical chronic diabetes.
			After 3 weeks	75	75	150	110-3c. B. 15-ac. D.	0	0	0.101	in weight	Marked increase in strength and vigor.
S. M.	F	51	Before	Mod.	limited		0	0.6	0	0.232	122	Weak and ill-appearing
			After 1 week	30	60	120	15-t.i.d.	0	0	0.110		Definite increase in strength.
D. E.	M	60	Before	Slight	limitation		0	5.0	+	0.439	163	Semi-conscious for 6 days preceding treatment. 175-100 during first 4 days to bring out of coma. Perfect recovery within 1 week.
			After 2 weeks	54	60	150	110-t.i.d. 15-at midnight	0	0	0.075	163	
A. A.	F	32	Before	Mod.	Restriction		0	5.0	+	0.915		Average of about 150 units of I for 3 days to bring out of coma.
			After 4 weeks	30	60	150	110-t.i.d.	0	0	0.094	130	Feels well and strong.
D. D.	M	32					1100 from 6-10 P. M.			None		Seen in deep coma at 6 P. M.
										taken		Death by heart failure at 11 P. M.
D. W.	F	11	Before	Unlimited			0	+	+	0.360		Deeply unconscious for 10 hrs. Out of coma in 4 hrs. with 30 units of Iletin.
			After 1 week	15	50	50	17-t.i.d.	0	0	0.110		
C.	F	8					110 from 9-10 A. M.			None		Seen in deep coma at 9 A. M. 10 units of Detin given. Death at 10 A. M.
										taken		
R. M.	F	2	Before	Undetermined			0	+	+	None	26	Semi-comatose, vomiting.
			After 3 months	41	35	73	12½-b.i.d.	0	0	taken	31	Well and strong.
H. R.	M	8	Before	20	40	80	0	Sl. +	0	None	44	Unable to keep sugar-free. Has had mild influenza.
			After 1 month	28	50	105	12-b.i.d.	0	0	taken	48	Remains free unless he oversteps his diet.
B. C.	M	4	Before	0	30	25	0	+	+	0.248	32	Weak, exhausted.
			After 3 months	15	36	94	15-t.i.d.	0	0	0.110	38	Strong and lively.
C. C.	M	7	Before	Mod.	limitation		0	2.7	0	None taken		Weak, unable to keep sugar free.
			After 2 weeks	35	45	90	12½-b.i.d.	0	0	0.074		Strong.

NOTE: In the above six cases of coma and semi-coma, glucose was given intravenously and by mouth when patients recovered consciousness. Otherwise the large doses of Iletin given would have produced fatal hypoglycaemia. We feel it important to continue to burn glucose with Insulin in order to eradicate the ketones in these patients.

MEDICAL SOCIAL SERVICE IN THE HOSPITAL*

By MARGUERITE A. WALES, San Francisco
From the Social Service Department of Stanford
University Hospital

"If there had never been any medical social work in your hospital, just where would you begin to develop such a department?" This was the question recently put by a student who was planning to go back to Australia to introduce social service work in a large city institution.

In a work as comparatively new as medical social service, most of us are organizing or reorganizing as the work develops, but many of us have come into the work in institutions where something under the name "social service" has been going on for some time. To answer this question, it will be necessary to put aside the particular problem of your special department, and to fancy yourself in the place of this student, on board a steamer bound for Australia or some port where "hospital social service" is unknown. You are to think out a plan that will work—a plan for a large city hospital with crowded clinics; an enthusiastic board of directors, eager to work but not knowing how to begin; an appropriation for salaries, but no staff selected; a progressive medical staff, interested but uninformed. Will the idea work? Will it pay? Of what value will it be to them?

First, it will be necessary to survey the field of work.

1. *The Hospital*—How are admissions handled? Does a trained worker interview patients, noting their needs and determining their social status or does an unskilled and possibly unsympathetic individual pass or reject patients according to his superficial judgment?

2. *The School of Nursing*—Are student nurses given an opportunity for training in social or public health work? There is a growing demand for nurses with social and public health training to fill positions in this interesting field—so varied and so full of promise. The social service department offers the only place for nurses to get even a glimpse of this great public movement.

3. *The Medical Staff*—What special clinics are they conducting—babies, children's, prenatal, tubercular, luetic? How are they checking up their progress? Are the clinics growing? And, the greatest test, are the old patients returning? Are they achieving the best possible results? Do old conditions recur?

4. *The Patient*—How much consideration is given the family problem; the home complications of caring for children while the mother is in the hospital; the after-care of weak patients; does treatment cease with discharge from the hospital?

5. *Community Resources*—Relief agencies, how efficient and how co-operative are they? Do the school nurses use the clinics as they should? Is there a visiting nurse association? Do they care for patients needing outside nursing care? What are the local facilities for convalescence? Homes

for children? For adults? What aid is given the handicapped? Is there a workshop for rehabilitation? The employment problem for the handicapped—is there a clearing house and placement bureau for those needing change of work?

While surveying the new field, the worker must bear in mind the importance of choosing the right policy at the start and of avoiding pitfalls. On the one hand, there is danger of having the department stand out in the minds of the medical staff and the hospital authorities as primarily "relief work" and the giving of free medicine. In the recent analysis of hospital social service departments in New York City, the recommendation is made that only emergency relief be given, all long-continued cases being referred to outside agencies established for that particular purpose. On the other hand, the department may be in danger of being swallowed up in hospital administration, becoming the financial investigating bureau to protect private practice. In the above-mentioned analysis of the 40 departments studied, 24 had no responsibility for this investigation, 4 occasionally, 4 decided all fees, and 8 investigated specified classes. In the recommendation of the social service section of the associated out-patient clinics of New York, we find: "Financial investigation of patients as to ability to pay the hospital or clinic is not the function of social service," although all agree that there should be close co-operation between social service and hospital administration. At the annual meeting of the American Hospital Association, too, we find this investigation for financial rating allowed only under the head of "temporary function" for the social service department.

What then shall be the "permanent function" of such a department? Plainly its immediate function should be to supplement medical treatment—to help restore patients to health. But beyond that its larger and more lasting effort should be in the field of prevention—to study the social causes of health and behavior, and to co-operate in the education of students of social work, and of the public, in general hygiene and matters of health. For "Prevention" is one of the slogans of the modern medical man, and many of the more progressive members of the profession have already found the social service worker an important member of their team in the drive for better health. Dr. Yarros says: "All of us of long experience among the poor in their homes are absolutely convinced that social service is most needed if we are to do first class medical work, not only curative but preventive." Chapin speaks of the folly of giving medicine without knowing the living conditions and intelligence of the parents. Every physician who works in a clinic will see his point, remembering some foreign mother who has reported giving internally medicine that was prescribed for inhalation, or external application.

With this ideal in mind—to make the physician's work, both preventive and curative, as effective as can be—the question that next presents itself is, Where to begin? Where shall the first wedge be inserted? The best avenue of approach would seem to be through one of the special clin-

* Read at the Annual Meeting of the California Association of Medical Social Workers at Yosemite National Park, May 16, 1922.

ics—the children's clinic, maternity and prenatal clinic, or the tuberculosis, or luetic clinic—as the home conditions and family relations of any one of these groups of patients have such a direct bearing on the treatment of the patient.

Probably the clinic where social service work shows the most immediate results is the children's. Here a nutrition class may be started, and the results of the social service worker's efforts definitely checked by the weight charts. While the physician is studying the medical defects causing malnutrition, the social worker can study the social conditions that contribute, and many are the reports of their splendid achievements through co-operation. Mothers as well as children may be invited to attend such classes. Each child has his weight and height entered on a large individual chart, and the charts are displayed on the wall. Then the race begins. The physician gives instruction and advice, to individuals and to groups at these weekly class meetings; the loss or gain of each child is recorded on his chart, and for doing specific things a child may be given some award. The results are positive; each one is eager to be in the lead, and poor health is very unpopular. In learning the rules of health play forms an important part, and here the social service worker's opportunities are unlimited.

In the well-baby clinic the social worker has an exceptional opportunity to make the physician's instructions really count. By visiting the home and understanding the mother's problems she can better convince her that the physician's order for a four-hour feeding, for example, will be a help to her as well as the baby. So also it is only by an actual visit, to the home, that she can help the mother plan to give her baby a separate bed in a well-ventilated room.

Similarly in the clinic for tubercular patients, while the physician advises the patient and checks up on his clinical findings, the worker should visit the home to determine whether it is safe to leave a child with a tubercular parent, or whether it should be placed in a foster home. She, too, can help to find for arrested cases, new employment which should be light in character. At St. Luke's Hospital in New York City, social service work began several years ago with one graduate nurse who visited tuberculosis patients in their homes; they now have a large department with fourteen trained social workers.

In the maternity department the visiting nurse or social worker has a field where teamwork with the physician adds much to the service rendered the patient. Here the group method is especially worth while. At the Stanford prenatal clinic, while the patients are waiting for examination, the nurse demonstrates the important points in bathing and caring for a baby with a life-size doll, meanwhile answering their many questions and explaining to them the physician's instructions. Pamphlets and printed instructions amount to mere scraps of paper until the nurse makes them real; it is gratifying to see how enthusiastic the new mothers are about making their preparations after they have actually seen the trays and tables set up in the clinic. As Dr. Yarros has said:

"The social service person, knowing the economic conditions in the home of the patient is able to instruct in care and preparations in home confinements, for she knows what she is dealing with."

Any one who knows the difficulties of keeping the patients of a luetic clinic from drifting away after three or four treatments can readily see how necessary it is for the physician to have assistance in follow-up work, and it is apparent that the social worker is an important factor in building up the clinic, for it is through contact with the home that she is able to persuade other members of the family to come in for blood examinations and for treatments. Notices and letters will do a great deal in keeping patients faithful in their return for treatments, but the personal interview is indispensable in many cases.

As the social service department progresses, workers should be placed in other clinics where social work would be of value, such as the medical with its opportunity for instruction in cardiac and gastro-intestinal work. The physician's instructions to a cardiac patient would be worthless if the patient were obliged to climb several flights of stairs each day—the social worker can often effect a change to a first floor room. The special work with children with heart diseases which has accomplished remarkable results in some hospitals is credited largely to the social service department for this group of workers has carried the chief responsibility—children are taught to rest between flights of stairs; visits are made to the schools to make special arrangements for the children to have their luncheons in the classroom, or to be allowed to step out of line as the class passes upstairs, and take the grade slowly; follow-up work after tonsilectomies and dental work is carried on; group education with the mothers is conducted by social service workers, regulating the exercise of children and other needs.

With a fairly clear idea of how this social service work should grow in the various clinics, let us consider the personnel that is to carry on the work.

Of course it would be desirable to increase the staff of workers as the work grows, but it is seldom that a hospital is able to keep pace with the work in this way. A small group of well-trained workers, who can be leaders in their particular department, is far more satisfactory than a larger staff of commonplace workers with little vision regarding the possibilities of their work. Workers must be interested in the weekly conferences, must realize that all are there for study as well as to work; they must be willing to keep abreast of the new developments by reading, ready to come together to discuss cases intelligently, and to report on the community situations. They must understand the importance of well-kept case records, and be interested in keeping these up to date.

To supplement the work of the trained worker we find the volunteer a valuable asset. On the outside, medical students act as volunteers in making emergency calls, getting valuable experience in the home, and at the same time proving of great assistance to the department in the care of its patients. In the clinics volunteers may be used in

countless ways. Every wide-awake director must have learned from her experience during the war that there are vast numbers of capable women who, though untrained, became efficient workers during the war, and who now find life dull and lacking in effectiveness unless they are given something to do. In Bellevue Hospital the chief volunteer works eleven months in the year, five afternoons a week, and is a marvelous executive. She has a card index of some sixty-five volunteers and in co-operation with the social service director is responsible for placing these workers in the various clinics and through the hospital. She says that as she interviews the new applicants her two requirements are regularity and common sense. To hold their interest it is only necessary to keep them busy. At the University of California the social worker in the children's clinic is doing a great deal with volunteers, training them to teach health through occupational therapy work. Health lessons are taught by miniature theaters and children help to write the plays.

At Stanford we find a progressive system works out very well. Almost all new workers spend a certain amount of time in the children's clinic. There they weigh and measure children, take temperatures, and write up the preliminary medical history, using a regular printed form which is part of the history. They are given instruction in general hygiene and health habits for children and as they take the histories are able to help the mothers understand why children should not drink tea and coffee, and so forth. They are next given a little experience in the social service office, taking routine histories; later each one assists in some special clinic; each one also gives a little time, when the clinics are not too busy, to distributing books from our circulating library to the patients in the ward, thus becoming familiar with the inside of the hospital and getting an idea of the needs of the patients there.

The volunteers have recently organized and are planning a rummage sale for clinic patients, the money thus raised to be used in developing occupational therapy work. This work will belong especially to the volunteers, and they can watch and take part in its progress, at the same time finding a special place in the hospital life.

From time to time we have conferences with the various medical chiefs of clinics, not only for the social workers, but for the volunteers as well. This helps to solidify the volunteer group and tends to increase interest. In these conferences, and sometimes at staff meetings, we find that the physicians are grasping the idea that social service is more than mere financial investigation, and that the chief aim of the social worker is to make the physician's work with clinic patients count for more than heretofore.

These patients have the same laboratory, X-Ray, and nursing facilities that are accorded to private patients. When a patient is discharged from the hospital, let the social worker ask the physician: If she were a private patient, would you be satisfied to have her go home, where she must wash and cook for half a dozen children? Would you order her to the country? Would you let a pa-

tient with a weak heart go back to heavy work? It is the physician's responsibility to order convalescent care, light work, or change of occupation. If the city does not provide facilities for such care, it is the duty of the social worker, and of the social service boards, to educate the public to such needs in the community. The auxiliary boards often form the chief point of contact with those citizens who are able to do most to remedy these lacks in the community. For this reason it is important that, through committee meetings and conferences, the boards be kept informed of the needs of patients, in order that they in turn may keep alive the interest of the men and women outside the hospital field who can help improve existing conditions.

(Stanford University Hospital.)

Monthly Reports of County Secretaries to State Secretary—For two years the State Society has had in use a blank form for monthly reports of county secretaries to the State secretary and the editor of the Journal. This report was introduced by authority of the House of Delegates. It indicates the type of data that is needed in the central office, and particularly by the Journal for the preparation of county society and other county news items, which should be published every month in the Journal from every county in the State. By the end of last year, after much effort, the co-operation of nearly all the county secretaries had been secured, and these reports were being furnished quite regularly. With the advent of the new year, many secretaries were changed by election, and new county administrative officers must again be impressed with the importance of these reports, not so much to the State Society as to the individual counties themselves.

This situation furnishes a striking illustration of the difficulties inherent in State-wide organizations, where the administrative officers of the various units are subject to annual election.

Some Public Health Plans of the National Government—The plan for reorganization of the Federal executive departments was submitted to Congress by the President on February 15, though no bill was introduced and no action taken. The principal matter of interest to physicians is, of course, the proposed new Department of Education and Welfare.

Existing bureaus which would be transferred to this Department of Education and Welfare are as follows:

- (a) From the Department of the Interior: Bureau of Education, Indian Schools, Howard University, St. Elizabeth's Hospital, Freedmen's Hospital and Bureau of Pensions.
- (b) From the Department of Labor: Women's Bureau and Children's Bureau.
- (c) From the Treasury Department: U. S. Public Health Service.
- (d) From the War Department: Soldiers' Home.
- (e) From the Department of Justice: Office of Superintendent of Prisons.
- (f) Independent establishments: Smithsonian Institution, Federal Board of Vocational Education, National Home for Disabled Volunteer Soldiers, Columbia Institution for the Deaf and the Veterans' Bureau.

The department would have four divisions, namely: Health, Education, Social Service and Veteran Relief, each under an assistant secretary.—Bi-weekly Summary on National Health Legislation, Legal and Governmental Matters, issued by Washington office of the National Health Council, March 5, 1923

CEREBRAL SYPHILIS *

By NATHANIEL H. BRUSH, M. D.

Santa Barbara, California

(From the Santa Barbara College Hospital)

The term "cerebral syphilis" is often used in speaking of or describing all phases and all stages of syphilitic involvement of the central nervous system. The use of this term as descriptive of a comparatively early syphilitic involvement of the nervous system is correct; its use when describing the later phases of the disease is quite incorrect and may lead to mistaken diagnoses. In a very broad sense the term is permissible, permissible from a nosological point of view, but from a diagnostic standpoint it is comparable to the diagnosis of a "fever" without any limitations or differentiations.

Anatomically, cerebral syphilis is divided into three forms: endarteric, meningitic, and gummatus, the terms implying the pathological changes that take place, and, as we are not concerned for the present with the finer points in anatomicopathological diagnosis, we will not elaborate on this.

In the differentiation between mesoblastic syphilis (for the purposes of this paper called cerebral syphilis) and paresis and tabes dorsalis there are many features that present themselves.

True cerebral syphilis is in reality a mesoblastic involvement or process, and generally speaking, as compared to paresis and tabes, both parenchymatous processes, an early involvement. I have personally seen one case with symptoms referable to the central nervous system occurring within six weeks of the initial infection. In this case the scars of the syphilitic rupia were still unhealed. However, the majority of authors give three to five years as the average time that elapses from infection to central nervous system manifestations.

In years gone by and before the elaboration of exact serology we were inclined to be hazy and uncertain regarding the connection between syphilitic infection and the development of paresis and tabes, but with the introduction in 1905 of the Wassermann reaction the etiology of these diseases became clearer, even then there were some physicians who shied at accepting syphilis as the sole cause of these diseases. Many admitted a possible connection, but even these men accepted the proof with reservations and hedged their statements by classifying paresis and tabes as meta- or para-syphilitic disorders. It was not until 1913 that Nogouchi and Moore, by their demonstration of the treponema in the brain cortex of paretics gave us absolute proof that these two diseases must be considered as active syphilitic processes.

Perhaps from what I have already said and from what is to follow, it will be concluded that a syphilitic infection will eventually result in an involvement of the nervous system. Such is not the case, though syphilis of the nervous system is a relatively frequent disease, some observers stating that from 2 per cent to 10 per cent of all syphilitics develop syphilitic disease of the nervous system. In this connection, I may be pardoned for a slight digression from my main theme.

All those who have studied the problems of syphilitic involvement of the nervous system have noted more or less frequently in paresis and tabes, and to some extent in cases of cerebral syphilis, that the initial infection in many instances is often very mild, in many cases unrecognized, and a large percentage of these infections are not followed by frank secondary manifestations. This gives rise to the conjecture as to the possible existence of strains of the treponema having a special predelection for the tissues and structures of the central nervous system.

But to return to the point at issue.

In cerebral syphilis we are dealing with a condition that has developed within three to five years of the initial infection and that, in itself, is an important point in the differentiation between this condition and the parenchymatous syphilitic processes.

The physical signs are diverse and it often requires careful observation and correlation of the facts to arrive at the correct diagnosis. Unfortunately, there are no absolutely constant diagnostic signs or physical findings by which we can arrive at the correct diagnosis.

The symptoms and mode of onset, however, may be of assistance. The most prominent symptoms being the rather acute onset of headache and dizziness, cranial nerve involvements, generalized or Jacksonian convulsions, not necessarily with loss of consciousness and often followed by permanent focal symptoms in the nature of hemiplegias and paraplegias. These occurring in an individual with a syphilitic history dating back three to five years should at once arouse in us the suspicion of the disease entity. In these conditions we are at times confronted by a mental picture, confusing at first, but on more careful observation it can be shown to be different from the mental picture of the typical paretic, and it is in the non-recognition of this mental reaction that so many faulty diagnoses occur. This mental reaction has been described by Adolf Meyer as the acute organic reaction, and its salient features are: confusion, delirium, auditory and visual hallucinations, and a memory defect involving recent events, these occurring without any slumps in the makeup of the personality.

In the diagnosis of paresis and tabes we are greatly assisted by the reflex changes and the pupillary reactions—by pupillary reactions I refer to the Argyll-Robertson pupil—but experience teaches us that the presence of the Argyll-Robertson pupil in paresis is by no means as frequent as text-books would have us believe. Many authorities claim that it is present in from 50 per cent to 75 per cent of all paretics, but my personal experience is that these figures are a bit too high. In tabes the Argyll-Robertson pupil is present in from 75 per cent to 80 per cent of the cases, some very radical authors stating that a diagnosis of tabes is not justified without the Argyll-Robertson pupil. But when we look for pupillary signs, especially the fixed pupil, in cases of cerebral syphilis we will find that the large majority of cases do not exhibit this phenomenon, and here we have a differential point of great importance. However, close ob-

* Read before the Santa Barbara County Medical Society on November 27, 1922.

servation often shows pupillary reactions of considerable diagnostic value, these reactions being sluggishness, inequality, and irregularity and taken in combination with the other elements of the case will prove helpful.

The reflex changes, so valuable in the diagnosis of tabes, will prove of little value in the diagnosis of cerebral syphilis, for the reflexes may be normal, increased, diminished, or absent according to the location of the lesion.

Serology in the differentiation of cerebral syphilis from tabes and paresis is the third important diagnostic feature. Fully 90 per cent of all paretics show the Wassermann reaction positive in both blood and spinal fluid. The spinal fluid of tabes is positive in fully the same percentage of cases, but the blood only in about 75 per cent of cases. It is this point that Plaut called attention to as a differential point between paresis and tabes. In cerebral syphilis the blood and spinal fluid may or may not be positive; the more acute and fulminating the case, the more liable are we to have a positive serology. It is the old chronic case that has remained stationary for a long time that shows the negative reaction.

We cannot draw very many conclusions from the globulin content and cytology of the spinal fluid. The presence of globulin and an increased cell-count speak only for inflammatory reactions taking place, and practically all cases of tabes and paresis show a moderately increased globulin content and a cell-count not too pronounced, but the spinal fluid in cerebral syphilis, being a more acute process, may have greatly increased globulin and a very high cell-count.

Much could be said regarding the treatment of cerebral syphilis. In these days of salvarsan, physicians are quite liable to overlook the old reliable remedy mercury. Salvarsan or arsphenamine is of extreme value in the therapy of syphilis of the nervous system but its value is increased by the judicious use of mercury. Mercury by mouth, by innunction, by hypodermic, but get the mercury into the system along with the arsenicals. Potassium iodide has its place as an adjunct to mercurial and arsenical therapy, alone the iodide is of no value whatsoever as it only helps in the elimination of various toxins and products disorganized and broken up by mercury and arsenic.

The method of administering salvarsan or arsphenamine must be worked out to suit the individual case. Shall it be salvarsan alone or salvarsan plus spinal drainage? These questions must be considered when we have studied the needs and analyzed each case separately.

To summarize:

1. As compared to tabes and general paresis, cerebral syphilis is an early involvement of the central nervous system. In the former the time that elapses from infection to development of symptoms is rarely less than ten years, in the latter the time is from three to five years.

2. The onset of cerebral syphilis is often acute with headache, cranial nerve involvements, etc., and a mental reaction that is fairly characteristic.

3. The Argyll-Robertson pupil occurs in fifty

per cent to seventy-five per cent of all cases of paresis and in seventy-five per cent to eighty per cent in tabes, its presence in cerebral syphilis is sufficiently rare to make it a differential point of importance.

4. Little value can be placed on the reflex changes.

5. Ninety per cent of paretics have a positive Wassermann reaction in the blood and spinal fluid. Ninety per cent of tabetics have a positive reaction in the spinal fluid, but only 75 per cent have a positive reaction in the blood. In cerebral syphilis the blood and spinal fluid may or may not be positive. The acute cases are the ones most liable to have the positive reactions.

6. A greatly increased globulin content and a high cell count point to cerebral syphilis.

7. Arsenical treatment with the assistance of mercury compounds is indicated.

Case of Ectopic Pregnancy at Term With Living Child—A diagnosis of pregnancy of about eight months with impending eclampsia having been made, an immediate cesarean operation was performed by B. J. O'Neill and W. W. Crawford, San Diego, Calif. (Journal A. M. A., March 31, 1923). The abdomen was opened by a right rectus incision, and a dark, bluish, smooth mass, resembling an ovarian cyst, was revealed. On palpation, fetal parts were felt, separated from the hands by a thin membrane, which ruptured almost at once, with a gush of water. The baby was lifted out in the usual way, the head offering considerable resistance. The cord was clamped, and the baby was revived by an assistant, with no more difficulty than is usual in a cesarean section. After removal of the child, there was a fair amount of hemorrhage, which was controlled by pressure with gauze. The uterus was somewhat enlarged. The left tube was about six inches (15 cm.) long, and the expanded fimbriated extremity was directly continuous with the cavity formed by the membranes. The placenta was thin and widespread, being planted on the posterior surface of the left broad ligament and on the sigmoid and the intervening pelvic wall, besides being adherent to both the large and the small intestine. The placenta thus formed the left and upper side of the sac. The left ovary was not identified. Actively bleeding vessels entered through adhesions from the large and small intestines, and some very large vessels entered the placenta from the broad ligament. The baby, a boy, weighing six pounds and three ounces (2800 gm.), had hair and well-developed nails, indicating birth at practically complete term. The skull was somewhat deformed from resting on the sacrum, and there was a moderate calcaneovalgus of the right foot, a marked talipes equinovarus of the left foot and a partial dislocation of the left hip, with indication of some bony pathologic process in the left knee. The post-operative course for both mother and child was uneventful.

National Board of Medical Examiners—The National Board of Medical Examiners will conduct examinations as follows:

Part I, June 25, 26, 27, 1923.

Part II, June 28, 29, 1923.

Part I, September 24, 25, 26, 1923.

Part II, September 27, 28, 1923.

All applications for these examinations must be made on or before May 15.

Further information may be obtained from the secretary, J. S. Rodman, 1310 Medical Arts Building, Philadelphia, Pa.

THE PSYCHONEUROSIS AS A PROBLEM FOR THE GENERAL PRACTITIONER *

By C. P. KJAERBYE, M. D.

The great danger which is threatening the progress and proper valuation of modern ideas in psychiatry, is the tendency of scientific men to lose their grip on the methods and tests which they have been trained to apply, as they are too easily enthused over the apparent facts, which modern psycho-pathology claims.

Another danger is the fact that a great part of the investigations into mental activities are undertaken by men and women, who lack the proper training in neuro-psychiatry and medical science in general, and these men are creating daily a number of understudies who are still more deficient in knowledge and training, and who are spreading for public consumption their theories, presented as facts, and mental experiments without the proper scientific control.

The public interest in Freudianism and other forms of psycho-analysis is a result of this propaganda, and this new public fad represents a physical and moral danger which can only be averted by a concerted and intelligent action of the medical profession. This duty makes it necessary for the physician to be informed sufficiently to put the public right on these modern questions.

As our old friend, or enemy, psycho-neurosis, is with us all the time, and represents either totally or partially an important issue in over 50 per cent of all cases the physicians are handling, it seems proper to try to come to some definite understanding of a working basis.

Every human being has a physical endurance-level, and a mental endurance-level—the threshold—which cannot be strained or overstepped for any considerable time with impunity; and while the two levels vary relatively, every physician clearly recognizes that there is a close relation between them. Medical science has succeeded in analyzing and determining the physical threshold and in raising the same to a higher level by proper treatment and hygiene. To disregard the facts obtained by this work when considering the mental threshold, would be illogical and dangerous, as every physician daily observes how closely the two thresholds are related.

We physicians observe the beneficial and curative effect on nervousness in children by regulation of diet; our patients acquire a new mental impetus as well as physical improvement following the removal of affected tonsils, adenoids, teeth, and other seats of focal infection; clearing up or curing chronic intestinal troubles affects the patient's mental attitude and consequently his general behavior. It is admitted, of course, that some cases cannot be reached by methods now known to the profession, this because of either our present ignorance, or because of the too long-standing or inherited condition having produced physical changes resulting in mental attitudes that cannot be changed because of the fixity of the changed condition of the organisms. Furthermore, the profession real-

izes that inherited weaknesses cannot be eliminated entirely, but may, and often are, held in abeyance or ameliorated by proper precautions and early treatment.

Experience has convinced me that neurosis as a disease is due to a low mental or physical endurance-level, and while this idea is used now only as a working theory, I am convinced by numerous observations that it is justified.

An overfed child, with irregular habits, will present a picture strikingly resembling hysterical or anxiety neurosis; an overtrained athlete, with his lack of "pep" and interest, has all the ear-marks of a neurasthenic; the different mental reactions of patients to identically the same surgical operation are well known to every surgeon, and the neurotic character of these reactions is very apparent. While many of these cases are to be explained as an overstepping of the physical endurance-level, we sometimes see cases of strong and robust men and women react badly to pain, shock and other exciting causes, while weak and delicate women stand them well. While this may in due time be explained, when the study of endocrinology has been more advanced, we must at present admit, that the mental and physical endurance levels do not always run parallel.

If we consider a low mental endurance-level the cause of psychoneurosis, we will then have to determine:

First. The hereditary causes of this condition and the physical condition in childhood which influenced the same.

Second. How early, and by what means, can this threshold be determined.

Third. What symptoms point to the fact that this threshold has been overstepped.

Fourth. After this threshold has repeatedly, and, we may say, pathologically, been overstepped, how can we bring the patient back to his original condition?

Fifth. How can this level be raised? Is it possible to do this only in early life, and must we be satisfied, in the case of grown persons, to restore them to comfort within their original threshold, and guard against overstepping the same in the future?

To understand this mental threshold, the symptoms of its overstepping, and the treatment of patients, it would be a mistake to disregard our experiences in the physical sciences which have brought us an abundance of knowledge and results, and which have proven the numerous connections between the mental and physical conditions in the same patient.

When the psycho-analyst succeeds in finding the repressed thoughts and subconscious complexes which are causing the present symptoms, and by bringing them into daylight removes the symptoms, he is doing excellent work; but the condition in the patient which caused him to repress and form complexes and which made the repression produce the symptoms, is still there, and it is clear that they are only removing the symptoms, and the condition or disease that produced the symptoms still remains. A normal person represses thoughts

* Read before the Fresno County Medical Society, November 7, 1922.

and wishes every day of his life without producing any complexes in his subconscious mind—at least, they do not harass him in later life in dreams, or in the form of neurotic symptoms when awake.

The principal fault of the psycho-analyst is not the work he is doing, but the work he neglects to do and the important factor that he overlooks: the discovery of the original cause of the condition and the means of preventing and curing the original disease is the important thing and the one thing that will result in a permanent cure. He, it seems, ignores the physical condition that may at the particular time of the patient's life be instrumental in accentuating the symptoms. Study of mental operations and mental attitudes through psycho-analysis, hypnosis and kindred methods has been invaluable to the medical profession in explaining the various steps in the development of symptoms of neurosis, and has been valuable in the knowledge of the mental mechanism as a whole, but these studies and researches and methods have not brought us to any better understanding of the causes of disease and the means of prevention of disease. To accomplish work of real value there must be co-operation between the family physician, the psychiatrist and psychologist, with the assistance of our splendidly trained specialists in other lines. In other words, the co-operation of the whole medical profession, and a better training of its members in psychology, offers the best hope for the future establishment of a true science of psychiatry.

In order to realize the importance of this co-operation and the importance of a scientific understanding of the physical condition in the determination of the diagnosis and treatment, let us examine further the problems of psychoneurosis:

First. No one questions the importance of physical facts in heredity in mental cases, syphilis, alcoholism, tuberculosis, and other disorders. Birth-trauma, infant-feeding, early diseases, early symptoms—in short, accurate and complete detail history of the case is recorded and often proves invaluable in determination of diagnosis and treatment.

Second. The final determination of the mental threshold in the young cannot be made until all physical conditions influencing the same are corrected. Every physician has seen the child who has been inattentive and dull at home and in school changed to an alert and bright pupil, and normal, active child, by the removal of tonsils and adenoids, or the correction of refractions. He has seen nervous, easily frightened children, with morbid fears, completely recover after regulation of diet, proper tonic and disappearance of diseased conditions of the kidneys.

It is only necessary to mention the influence of thyroid feedings in the cretin child to bring before us the connection between mental and physical ailments, and remind us of the importance of the endocrine system to the mental workings all through life. But too well we physicians know that, after we have removed, according to our present knowledge, all physical defects, there are still children who easily become mentally exhausted and unbalanced. A mental test in any of the many

forms, used by an intelligent doctor, will soon determine whether or not he is dealing with a case of arrested mentality, and such cases will, of course, not be considered in this article. But the cases here considered must be dealt with intelligently. We all know that it is the duty of the family doctor to point them out early, advise the parents, and call in help when he deems it necessary.

Third. A close and intelligent co-operation between parents, teachers, and family physicians will early discover the symptoms, and treatment can be given before it is too late.

Fourth. The treatment of the psychic-neurosis and the prevention of their recurrence is too big a subject for this paper, but a good working knowledge of this subject is an indispensable part of the family doctor's armamentarium.

Fifth. In raising this mental threshold or endurance-level, we are confronted with a most difficult problem, but to resort only to mental methods and neglect the physical corrections would be no less than criminal. The results obtained by these physical corrections are most encouraging, and as the science advances, are bringing better and still better results, and the earlier in life and more thoroughly they are done, the more gratifying have been the results. By results already attained, the profession must be convinced that it is fighting along the right lines and proceeding in the right direction. It would be foolish, if not indeed criminal, for the profession now to cast aside these valuable experiences and rely only upon modern, and often poorly trained, psychologists, to treat the patient. Far be it from me to underestimate the value of the psychologist's work in determining the mental status of the patient, but like the laboratory test, his work is only a single part of the total work, and is of value only when considered in connection with the full clinical and pathological picture.

It is self-evident that the mental test in case of praecox, C. S. syphilis, neurosis and like diseases, standing alone, does not bring us any nearer to the diagnosis. The modern determination of the physical threshold in cases of diabetes, arteriosclerotic nephritis, tuberculosis, etc., furnish excellent comparative examples, and it is only logical to work along the same lines when we consider the mental threshold, because the nervous system is the organism through which the mental functions evidence themselves. The psyche or mentality is either the function of the nervous system, or some superior or independent force functioning through the nervous system. In either case it is evident that this system's working capacity, endurance-threshold, and deviation from normalcy, must be studied, sustained and repaired according to the same principles which govern the other parts of our anatomy.

Dinner for Women Fellows of the A. M. A.—A dinner in honor of the women physicians attending the American Medical Association Convention will be given at the Fairmont Hotel on Thursday, June 28, 1923, at seven o'clock p. m., under the auspices of the women members of the California State Medical Association. For information Louise B. Deal, Chairman.

THE APPLICABILITY OF ALKALINIZATION IN THE TREATMENT OF TUBERCULOSIS *

By FRANK PORTER MILLER, M. D.

In this discussion we will assume that the constituents of body cells are composed of molecules of colloid material, and these are quite susceptible to the medium in which they are surrounded, whether that be acid or alkaline.

In practically every act of the body, whether it be the voluntary act of muscular exercise or the involuntary processes of metabolism, there is always liberation of acid. Normally, the tendency of the body is to swing toward the acid side, and this would occur uninterruptedly were it not for the fixed bases within the body. The equilibrating body which tends to maintain a normal balance is the alkali reserve.

Any condition in the body which is associated with a pyrexia of long standing must be associated with an acidosis. It will be our attempt to show the efficacy of alkalization when the acidosis is due to a tuberculous foci. There is one principle which we should ever bear in mind; i. e., an inadequate supply of oxygen to any portion of the body or the incomplete removal of oxidative products, favors the production and accumulation of acid, and this predisposes to tissue solution.

The body as a whole should be considered as a composite mass of cells with a complex chemical construction, receiving its sustenance through the blood stream. The blood carries in solution or suspension the various products of metabolism or assimilation, and by the proper interchange of absorption and elimination, factors are maintained which promote health. In event a perversion of any of these processes occur, there is a functional or physiologic derangement, which, if persisted in, will produce pathologic changes.

From a physiologic viewpoint the blood should be considered as holding in suspension salts, cells, and other organic and inorganic material. It is alkaline or neutral in reaction, and the principle alkalies which it possesses are the sodium and potassium, carbonates and phosphates. The alkalies also constitute a dominant place in protoplasm, as they hold in combination the albumins with which they are combined. There seems to be a tendency on the part of the body organism to maintain its own alkalinity, and in the event there is a reduction, serious changes may occur. The presence of fibrin in blood plasma should also be borne in mind, and its precipitation or coagulation in certain pathologic lung conditions as pneumonia is well known. Fischer attributes this to acids, or an excess of alkali, principally the former. Another cause is the presence of any foreign body in the blood.

The chief function of a red blood corpuscle is that of a vehicle for the gaseous elements. They carry oxygen from the lung to the tissues, and promote the elimination of carbon dioxide from the body. To provide adequately for these changes,

hemoglobin and alkalies must be provided. Hemoglobin in a highly complex protein body, which is able to combine with oxygen, but unable to oxidize it. Because of its ready power of dissociation it acts in a dual role, furnishing the oxygen for oxidative purposes, and withdrawing the chief metabolic offender—carbon dioxide. Carbon dioxide and carbonic acid are principally the end products of any tissue change and metabolism.

A study of the gaseous exchange which is of such vital importance to cellular life is the next step. We find the blood corpuscles contain carbon dioxide and carbonic acid in solution as, phosphates, carbonates, or bicarbonates of sodium and potassium, or as methemoglobin, and convey these substances to the excretory organs of the body. Remembering the diffusibility of gases, and since the tension of oxygen in air is greater than that of the blood, and the tension of carbon dioxide in blood is higher than the outside air, the exchange can readily take place. Naturally, the oxygen of the air passes through the lungs into the hemoglobin in exchange for carbon dioxide and carbonic acid. When this occurs the alkalies are liberated in blood and again assume the function of combining with carbonic acid affinities.

Try and conceive of a picture where there has been an interference in the cycle of exchange of oxygen, carbon dioxide, carbonic acid, and a withdrawal of alkalies! In the first place, a diminution in the supply of oxygen produces cellular acidosis. The affinity of carbon dioxide for water increases the amount of carbonic acid in the blood and tissue, and this produces acidosis. Furthermore, the withdrawal of alkalies from the albumins in solution increases the viscosity of the blood. Any factor which increases blood viscosity reduces the velocity of the blood stream, unless the force behind this is appreciably increased. May not this be a factor in the production of acute dilatation of the heart, which is the terminal manifestation in most tuberculous cases?

The pathology incident with pulmonary tuberculosis is the formation of the tubercle, surrounded by a collateral zone of inflammation. In the process of evolution the capillaries which course to the tubercle undergo certain changes, particularly an endarteritis, and this factor inhibits the normal supply of oxygen reaching the part, and also the incomplete removal of waste products. Carbonic and lactic acids are continuously being formed within the tissue, and the presence of toxins, generated by bacillary infection, plus an increase in H. ion concentration will ultimately produce destruction of lung parenchyma. The evidence adduced by Bradley & Taylor relative to synthesis and autolysis in tissue is extremely interesting. They have shown that when the reaction of the blood swings toward the acid side the reserve protein is transformed into available protein and this undergoes autolysis. They are of the opinion that a greater blood supply and a more complete removal of waste products will reverse the process and lead to laying down of reserve protein and, therefore, to growth of the cell. It is quite plausible that the point of equilibrium being shifted

* Read before the 67th Semi-Annual Convention of the Southern California Medical Society, Los Angeles, November 3, 1922.

would bring about autolysis on the one hand and synthesis of tissue on the other. When we deprive an organ, such as the lung, of its oxygen supply by preventing the normal influx or preventing the normal efflux, the resulting accumulation of acid is obvious, and as the buffer substances become largely exhausted, there is precipitation of colloids, and naturally those which are first attacked are within the lung or that portion of the body, where the oxygen supply is poorest and the production of acid greatest.

In prefacing these remarks we stated that the body cells were composed of colloid molecules. If we are to accept the classification of Fischer, we find two types of colloids. Those which are viscous, gelatinizing, and not readily coagulable with salts—colloid in solution, and those which are non-viscous, non-gelatinizing, or colloid in suspension. The essential difference resides in their relation to the solvent. Those which are in close association with their solvent are known as hydrophilic colloids, and a reverse of the above is known as lyophobic colloids. Fischer is of the opinion that all colloids swell in the presence of acid, and this is probably the first act in the precipitation of lung colloids.

We also know that Vaughan has separated glutamic acid and other split proteins from the tubercle bacilli, and acid is probably produced by the mixed infection which is always present. One other source for the production of acid, and that again recalls viscosity of the blood. Raising the viscosity of blood prevents the removal of acids which are continuously being liberated in the tissue. The aforementioned gives us multiple sources for the production of acid, and, as Stern has attempted to show, the soluble colloid may then be converted into a gelatinizing mass, and then we have the pathologic picture of a pneumonic area surrounding the tubercle. I mention the last as a probable sequel to production of acid, and this may account for the pathology, but as yet the evidence is rather inconclusive. Allow me to recapitulate quite briefly the source of acid production, so this point may be quite clear. First, a diminution in normal oxygen supply producing cellular acidosis. Second, the affinity of carbon dioxide for water, producing an excess of carbonic acid. Third, increased viscosity reducing velocity of blood current, and inability to remove oxidative products. Fourth, production of acid in the metabolism of foods, and which I will discuss later. Fifth, acid produced by the specific organism, and also those due to mixed infection. Consider the above-mentioned plus hypoalkalinity, due to the withdrawal of alkalies, and then we have a rational indication for alkaline therapy. With the advancing acidity, cell proteolysis, increased hydration, and the conversion of colloids into a gelatinizing mass, we then have the end product from a theoretical viewpoint. Whether this occurs as an actuality, I am unable to state.

Alkalinization can be largely accomplished through the dietary, and, to thoroughly interpret this, it is essential that we decipher, in a measure, the elements in our diet.

In the metabolism of proteins not inconsiderable amounts of acid are formed. If the proteins are improperly used, or used in excess, not only are amines formed, but also toxins are formed which act as acids. In the destruction of this group the amino-fatty acids which are formed are not only acid, but alkaline as well, and as commonly expressed amphoteric. The general opinion is that the action is usually an acid one, and this amphoteric action may be an attempt on the part of nature to compensate for an excess of either acid or alkali within the body. Also in the metabolism of fats, if an insufficient amount of carbohydrate is present, diacetic and beta-oxybutyric acid are formed. A protein diet yields after oxidation in the body 25 per cent excess of acid, while a vegetable and fruit diet yield 25 per cent excess of alkali. It is easier and better for the patient to be liberal with his diet, but to protect him against the effects of an excess of acid by a continuous feeding of alkali where the urine remains persistently neutral to litmus.

In treating tuberculosis, no attempt should be made toward a drastic revision of the dietary, but we should strive for a balance. From the foregoing remarks, one might feel that we were attempting to minimize the protein intake, but such is not the case; it is only for balance that we plead. Fifty per cent of the patients which come under our supervision are "meat eaters," and you will have to teach these patients to eat vegetables. As taste is merely a cultivated matter, these patients will soon "fall in line" if shown the efficacy of a dietary rich in alkalies. I think we sometimes fail to get the optimal benefit of our alkaline therapy, because too little attention is directed toward diet. This cannot be supervised too closely.

Vegetables are combined with bases and weak organic acids which are mostly oxidized to a respirable carbonic acid. There are a few of weaker organic acids, such as oxalic, tartaric, and benzoic, which cannot be oxidized in the body. Foods high in mineral acids or those organic acids which cannot be converted into carbonic acid should be avoided, unless special pains are taken to give with such foods an adequate supply of alkali to neutralize the acid.

It might be well to recall that the vegetables possess a great many salts, and that these will inhibit the precipitation of colloids by rendering the acids inert. This is probably accounted for by the fact that the acid within the cell is replaced by the radical of the added salt.

It would be more or less academic to give a complete list of foodstuffs and their constituents. They may be classified into three divisions. First, those foods which are neutral in action. Second, those which are acid in action. Third, those which are basic or alkaline in character. The latter group comprise all vegetables, fruits, and practically all nuts. The fruit juices are quite palatable, and most of these possess citrates and malates, and much to be desired. In giving fruit juices it is well to bear in mind the high percentage of carbohydrates, and may not be well borne. Two or

three exceptions may be noted in the fruits, viz: plums, prunes, and cranberries.

In the recovery from disease it is essential that the process of restoration be as complete as possible, and that we restore the normal physiologic activities which were in existence prior to the alterations produced by the disease. Our success is entirely dependent upon our ability to reproduce a metabolism within the lung which approaches the normal. In choosing food products, show a preference to those in which the organic acids are readily oxidizable; also those which possess a high content of citrates, malates, tartrates, and benzoates, and preferably with a sodium and potassium base. Ingestion of the above in sufficient quantity will preserve a normal balance of the albuminous substances in the blood and tissue.

Relative to drug therapy, we should give a product which replaces the alkali residents within the blood.

Sodium citrate has been advised in the treatment of pneumonia for quite some time, and its success justifies its continuance. Good results have been obtained, because within the body it is converted into sodium carbonate. The thought may enter the mind of a good many that we probably should give sodium citrate in beginning our alkalization. This is unwise, as the drug is very irritating to give per mouth. In giving it in solution per rectum it can only be continued for a short period, because of its irritating effects.

There is one other drug which I wish to mention. One that has been used, discarded, used again, with varying degrees of success. This drug is calcium. It is a notorious fact that the workers in the vicinity of lime kilns develop an unusual immunity against the disease. An analysis of the air discloses the fact that there are certain particles floating in the air, and usually these are calcium oxide or calcium sulphate. To claim specificity for this drug is only a narrow conception, and the good results are obtained by raising the alkali reserve within the body. Lime in the presence of water forms calcium hydroxide, and this is caustic or antiseptic, but not to the point of having bactericidal action when within the body. The administration of calcium salts per mouth and intravenously does not seem as efficient as the inhalation method. The deposition of lime salts which occur in healing is another factor for their use.

A great deal of alkali may be administered through the intake of water, and we usually give some alkaline water, either natural or artificial, and it is immaterial whether this be carbonated or still. A favorite of ours is Kalak water. This possesses the bicarbonates of sodium, potassium, calcium, and magnesium. When acidosis is present all the bases of the body are drawn upon. How many of us in the past have attempted to alkalize our patients by the use of sodium bicarbonate alone? Sodium bicarbonate is insufficient for a number of reasons. Our primary object is to rid the body of carbonic acid, and since sodium bicarbonate is saturated with carbonic acid, it makes a poor carrier. We should prescribe something which in the body is readily convertible into the carbonates and phos-

phates. Furthermore, by giving the bicarbonate of sodium, we only replace the sodium base within the body. A methodical method of introducing the water is now essential. It is well to give a glass of water every hour through the waking hours. This will permit of at least two quarts being taken each day. It seems to me that there is only one possible objection could be offered to this vigorous administration of water; namely, it will remove through the kidneys various salts which are beneficial.

EXPERIMENTS ON THE BACTERICIDAL ACTION OF THE VIOLET RAY

By EVELINE BENSON FISHER, Pacific Grove.

Through Dr. T. C. Edwards of Salinas and his interest in the Violet Ray and its action, a series of experiments were conducted in the laboratory relative to the bactericidal action of the Violet Ray.

A culture of staphylococcus pyogenes aureus was obtained from an active case of furunculosis. A minute sub-cutaneous dose of this culture was administered in two minims of normal salt solution to a guinea pig, after a white cell count had been taken. The first leucocyte count was 7,200; the next day it went to 8,000, and the third day to 8,300 with considerable irritation at the point of inoculation. The fourth day, the count was 9,000. Counts taken after the fourth day showed a steady decrease of white cells until recovery.

The remaining portion of the culture of staphylococcus was given a five minute Violet Ray treatment, which was applied to the outside of the culture tube. A transplant was then made. After twelve hours the transplant had an abundant growth. The same treatment was given daily for four days with no apparent effect on the organisms. Thinking the glass tube interfered with the action of the rays, we inserted the glass Violet Ray 'spark tube' into the culture media and gave it longer exposure. This was also done for several days. The longer exposure was sufficient to melt the agar-agar media, but had no effect upon the growth of bacteria so far as could be observed from the daily transplants.

When its virulence was tested out by inoculating a guinea pig with two minims of this culture the result was practically the same as was obtained on the pig receiving the culture before it was treated, showing that the culture was just as virulent after exposure to Violet Rays as before.

At the time of these experiments, Dr. Edwards was treating furunculosis with the Violet Ray and cured many cases after three treatments on successive days with a five to eight minute exposure. He said, the more acute the conditions were, the more quickly they responded, if treated early. One case of beginning infection on the neck was entirely relieved after one treatment. Dr. Edwards also reports a case of folliculitis decalvans (diagnosed as such by Dr. Howard Morrow, of San Francisco) that was showing very marked improvement after thirty days of treatment. The patient left Dr. Edwards at that time,

so that he was unable to ascertain if the improvement was permanent.

Another series of experiments gave the following results:

A white cell count was made on a patient suffering from furunculosis, and showed 8,500 leucocytes before treatment, and, six hours after a five minute treatment, the leucocytes had increased to 10,000. The following day the same patient had a leucocyte count of 10,600 before treatment and of 11,800 six hours after, with a treatment of the same duration as the previous one. On the third day the count was 11,000 before, and 12,200 after treatment, the boils were drying up and the soreness leaving. The fourth day the count was normal, of 7,800; and no further treatment was necessary.

The same plan of observation was carried out on six cases of furunculosis, under Violet Ray treatment, the table (Fig. 1) shows the daily

Influence of Various Symptoms in the Prognosis of Pulmonary Tuberculosis—The comparative value of certain symptoms in cases of pulmonary tuberculosis which aid clinicians to predict for their patients something of their ultimate chances of recovery is discussed by F. B. Trudeau, Saranac Lake, N. Y. (Journal A. M. A., March 24, 1923), on the basis of the present condition of 980 patients. The way the disease began apparently plays little or no part in determining its future course. Only 53 per cent of these patients whose sputum was positive are well and working, as contrasted with 79 per cent among the negative cases, while the mortality among the positive cases, from five to eleven years after discharge, is 32 per cent, as compared to only 6 per cent in the negative cases. Sixty-one per cent of the hemoptysic patients are well and working, as compared to 65 per cent of non-bleeding patients, while the death rate is practically the same for the two types of cases; namely, 23 and 22 per cent. The beneficial importance of a gain in weight is very evident. More than 67 per cent of these showed a gain in weight averaging $8\frac{1}{2}$ pounds (3.8 kg.), as contrasted with only 28 per cent who

Day	First		Second		Third		Fourth		Fifth	
Pt.	Before	After	Before	After	Before	After	Before	After	Before	After
1	8,500	10,000	10,800	11,000	12,200	10,000	7,800		No Treatment	
2	9,000	10,000	11,500	11,800	13,000	10,500	9,000	10,000	8,500	
3	7,500	10,200	10,800	11,000	11,400	8,200	10,000	9,000	7,000	
4	10,000	11,000	11,500	12,000	13,000	11,000	9,000	10,000	9,000	
5	9,000	10,000	12,000	12,500	13,000	10,000	8,000			
6	11,000	12,200	12,700	13,000	14,000	12,200	10,000	10,000		

Figure 1. Showing the daily leucocyte count on six cases of furunculosis before and after each treatment.

leucocyte counts made on each patient before and after treatment.

Pus was taken from four of the cases, on the third day when the boils were at their worst. Cultures were made in each case, and there was an abundant growth after twelve hours. Three contained pure cultures of staphylococcus pyogenes aureus and one, staphylococcus pyogenes albus.

As a control, leucocyte counts were made on two patients suffering from boils on the neck (staphylococcus aureus) and receiving no Violet Ray treatment. The counts are shown in (Fig. 2.)

Day	First	Second	Third	Fourth
Pt.				
1	8,800	9,200	9,000	9,000
2	8,200	8,000	8,500	8,400

Figure 2. Showing the daily leucocyte count on two patients not receiving treatments.

These experiments seem to indicate that the benefit derived from the Violet Ray is not from its ability to destroy bacteria but rather its power to increase the number of leucocytes. When we failed to inhibit the growth of bacteria with the treatments, and before Dr. Edwards saw the results of the laboratory work done, he concluded that at least part of the benefit came from the increased blood supply to the part, which was shown by the intense hyperaemia after each treatment.

(Pacific Grove, California.)

lost weight, and approximately 5 per cent whose weight remained stationary. Among those who gained, the figures for the "wells" and "deads" are 67 and 20 per cent, respectively, contrasted with 57 and 27 per cent of those who lost weight. Patients whose weight remained stationary did practically no better than those who showed a loss of weight. The symptomatic importance in prognosis of the pulse is emphasized. Cases are rated as "pulse positive," in which a pulse rate of 90 or over persists for five consecutive days, and diagnosis fails to reveal any other cause than tuberculosis. Sixty-nine per cent of the negative pulse patients are well and working, as compared to only 49 per cent of those having tachycardia, while only 16 per cent of the former class are dead, as compared with 38 per cent of the latter. Cases are classified as "fever positive" when the patient's temperature was 99.5 F. or over for five consecutive days, which could not be explained by any other cause than tuberculosis.

The Problem of Preventive Medicine—This problem is discussed by Samuel R. Haythorn, Pittsburgh (Journal A. M. A., March 31, 1923), under two general headings: (1) influences that are developing an ever-increasing demand for disease prevention in the practice of medicine, and (2) preventive medicine in the medical curriculum. Haythorn urges that the teaching courses in all departments be reviewed thoroughly, with the object of stressing successful preventive methods for the benefit of the students. The teaching should be carried out with a view to informing the student of the best preventive measures available, and should be directed toward preparing him for leadership in progressive health movements. If the public is convinced that the physician and student are doing everything within their power to decrease sickness and prolong life, there is no danger that it will not continue to extend to them the protection and support they have always enjoyed.

EDITORIALS

THE HEMOSTATIC ACTIVITY OF THROMBOLASTIC AGENTS

In discussing the physiological effects of blood-letting in his "Medical Treatment of Disease," Rudolf¹ quotes results of his previous work² to the effect that the coagulation-time of blood is more surely hastened by hemorrhage than by any other means tried. This is strictly in accordance with the results of physiologists and pharmacologists³ who have found that repeated, small hemorrhages in dogs tend to shorten the coagulation-time of blood.

It is obvious, therefore, that any method for the biological standardization or evaluation of hemostatics,⁴ including the thromboplastic agents (thromboplastin, kephalin, coagulen, coagulose, hemostatic serum, etc.), which involves repeated bleeding, cannot be accurate, and is misleading. The evaluation of clinical results with thromboplastic agents in bleeding conditions is obviously hampered by this same tendency to spontaneous limitation of bleeding, which may be regarded teleologically as a biological protective mechanism.

Scientifically, a reason why bleeding tends to stop spontaneously is suggested from the work of Howell, who contends, on the basis of considerable proof, that the tissues (tissue juice) are the seat of the natural thromboplastic agent (kephalin) rather than the blood, so that as the blood from a wound trickles over the lacerated tissue, therefore, tissue juice, which contains the kephalin, clotting is spontaneously initiated. Only an exceedingly small quantity, or concentration, of kephalin is necessary for this, and there is no good evidence that tissue juice is lacking in this constituent. On the contrary, kephalin appears to be abundantly present. It follows from this that the treatment of hemorrhages by the local application, injection or oral administration of kephalin and other thromboplastic agents is superfluous. When these agents are combined with other measures, such as pressure, ligation, etc., it is illogical to attribute the beneficial effects to the hemostatic agent.

In view of the facts that the process of blood coagulation and the etiology of hemophilia are not fully understood, it is apparent that positive assertions regarding the thromboplastic agents as etiologic and beneficial therapeutic remedies in the treatment of hemorrhages and hemorrhagic conditions are unjustified. Out of the entire list of such agents, only one has been isolated and identified chemically; namely, kephalin. Another, the thromboplastin of Hess⁵ is a mixture of various constituents, one of which may be kephalin. Neither of these two preparations is secret. The methods of preparing them have been published and both have been studied physiologically and pharmacologically. Both are accelerators of plasma and blood coagulation *in vitro*, but when it comes to their evaluation and therapeutic application *in vivo*, nothing definite or certain is known. For various reasons (secrecy of preparation and composition,

unscientific testing, etc.), the remaining preparations of the thromboplastic type merit no consideration, several having been found to be inactive, the claims and wide commercial exploitation of interested promoters and manufacturers to the contrary notwithstanding. The preparation called "fibrinogen," which is the commercial name for a tissue fibrinogen, recently prepared and described by Mills and co-workers,⁶ requires further investigation before it can be claimed to possess undoubted thromboplastic activity when given by mouth and subcutaneously. With thromboplastic agents it seems to be so many times that, "Others rush in where angels fear to tread."

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DECOMPOSITION OF COCAIN SOLUTIONS BY BOILING AND ON STANDING

Opinions and reports regarding the decomposition and keeping qualities of cocain solutions have varied from time to time. Formerly cocain was thought to be readily decomposed by boiling. In recent times it has been generally accepted that boiling for fifteen minutes to half an hour does not alter the activity of cocain solutions. However, variations in anesthetic qualities, and accidents continue to be reported, and these might be connected with the chemical reaction of the solution. Chemically cocain is an ester. Hence, it would be expected that chemical reaction influences its decomposition. The matter had never been investigated until recently by Rippel of the Pharmacological Institute at Rostock, who prepared solutions of cocain hydrochlorid of known chemical reaction—that is, hydrogen ion concentration (pH), and kept some standing at room temperature and boiled others for one hour. The solutions were then tested biologically on the excised heart of the frog, which is very sensitive to the drug, the majority of hearts showing depression with concentrations of 1 : 50,000. The biological test was carried out by first finding out the depressant concentration of the freshly prepared cocain solution; then the heart was allowed to recover and, when recovery was complete, the treated cocain solution was applied and the depressant concentration of it determined.

Using the heart test in this way, Rippel found that a 1 per cent cocain solution of weak alkaline reaction (a trifle more than that of blood; i. e., pH = 7.8), which had stood at room temperature for eight weeks, lost 80 per cent of its activity. Boiling the same solution for one hour caused a decomposition of 85 to 90 per cent. A neutral solution (pH = 6.9) had decomposed to the extent of 60 to 65 per cent after standing for sixty-three days at room temperature, and to the extent of 60 to 70 per cent when boiled for one hour. Cocain solutions with a degree of acidity

similar to that of urine ($\text{pH} = 5.8$) lost about 40 per cent of their activity on standing for sixty-two days. At a still higher degree of acidity, i. e., about like that of gastric juice ($\text{pH} = 4.3$), there was no demonstrable decomposition at the end of sixty-two days or on boiling for one hour. Therefore, solutions of cocain were found to be stable on standing and by boiling only when kept rather strongly acid.

The following simple directions are given by Rippel for the preparation of cocain solutions which can be sterilized without decomposition: The acidity of the solution is regulated by the addition of a weak acid so that when one or two drops of p-nitrophenol solution are added, only a weak yellowish color is obtained, and only a yellowish, but not violet color when one or two drops of alizarin sodium sulphate solution are added. The cocain could be dissolved in a solution containing a mixture of one part of primary phosphate ($\text{NaH}_2\text{PO}_4/15$) and nine parts of secondary phosphate ($\text{Na}_2\text{HPO}_4/15$). This gives an acidity of $\text{pH}=5.8$, i. e., about like that of urine. Then the cocain solution can be boiled one hour and it can be allowed to stand at room temperature for two or three months without loss of activity. By adhering to these precautions, it is probable that a greater uniformity of anesthetic response will be obtained in practice. It is conceivable also that the toxicities and accidents from the use of cocain as a local anesthetic may be avoided, in part at least, if the unknown and variable concentration of cocain in solutions is avoided, and this can now be accomplished by preparing cocain solutions with proper chemical reaction.

The work of Rippel illustrates the practical importance—in fact, indispensability—of methods of precision, involving the principles of physical chemistry and of biology, to pharmacology for the rationalization of therapy, and, therefore, in clinical practice. In this case, a common, every-day local anesthetic is involved. Other agents, of course, have been and are being quite as fruitfully investigated.

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SOMETHING TO SHOOT AT

Following is the official registration of Fellows at a number of meetings of the American Medical Association:

1905	Portland, Ore.	1,680
1911	Los Angeles	2,153
1915	San Francisco	2,307
1916	Detroit	4,585
1917	New York	5,147
1918	Chicago	5,553
1919	Atlantic City	4,929
1920	New Orleans	3,681
1921	Boston	5,506
1922	St. Louis	5,174

AMERICAN MEDICAL ASSOCIATION ANNUAL MEETING

Satisfactory and encouraging progress continues to be made. Practically all of the numerous committees concerned with the convention itself, as well as with post-convention programs, have been completed and are all actively engaged in the discharge of their several duties. The chairmen of all committees, together with the representative elected officers of county societies, sections and of the State Society, constitute ex-officio the Central Committee. The entire membership of this committee is published on pages 223 and 224 of this number of the Journal. We will be very glad of any notations of corrections or omissions from this committee.

The Finance Committee is still struggling with the most important problem connected with the convention. This number of the Journal contains a separate editorial on this subject.

The General Entertainment Committee and the other committees, such as Golf, Outdoor Entertainment, Clubs, Women's Clubs, have completed their programs and will have all the details for a successful convention from a social standpoint well worked out in ample time. The Women's Entertainment Committee has completed a most attractive program for the entertainment of our women guests.

Committees having to do with post-convention activities have nearly all completed their programs and from now on are concerned only with the details of carrying out these programs. The post-convention program for July 2 and 3 constitutes one of the several innovations to be introduced at this session of the A. M. A. We have every reason to believe that it will prove attractive, interesting and unusually profitable, not only to physicians, but to the public.

Every member of the California Medical Association is a member of the General Reception Committee. As many as possible should attend the convention, register, and receive, and wear constantly during the convention and post-convention weeks, the special badge that has been prepared for that purpose.

"MEDICAL CALIFORNIA," the book being prepared by your committees for distribution to all Fellows and guests of the A. M. A., is now in press. It contains the entire program of all social and entertainment features; it discusses the points of interest throughout California that visiting physicians might like to see; it contains a considerable amount of data regarding public health, hospitals, number of physicians and their proportion to population, for the State as a whole and for each individual county. This book will be 148 pages in size, printed on the very finest of paper, with a cover done by one of the best artists in California, and profusely illustrated throughout. It is not a pamphlet, but a book of information about California, put in such a form that the holders of the 10,000 copies will want to keep them and use them for reference in the days to come.

The officers and members of committees of State

and county medical societies and of auxiliary medical organizations of the State, as well as all officers and chiefs of staff departments in all the accredited hospitals of the State, are appropriately listed in this book, with their addresses. This and all other data in the book is as complete and as accurate as it was possible to make it in such a short space of time. Those few centers that could not find the time to co-operate and furnish requested data for this book may feel a sense of disappointment when it appears.

However, the editor feels nothing but enthusiastic praise for the splendid co-operation that has been shown by nearly all the officers and members throughout the State, not only in accumulating data for this publication, but in all other matters connected with the organization of the vast undertaking of the Statewide Convention of the American Medical Association.

THE 1923 MEETING OF THE STATE SOCIETY

The program for this year's meeting of the State Society is being assembled and will be published in full in the June number of the Journal. This meeting, as is now quite generally known, will be held on Friday and Saturday, June 22 and 23, preceding the Seventy-fourth Annual Convention of the American Medical Association.

The program, although not so protracted as in former years, is exceedingly interesting, both from the standpoint of section meetings and the general meetings. Every member of the State Society should be present at the general meeting on Friday morning and that of the League on Saturday morning. Distinguished visiting Fellows of the A. M. A. will be on both programs.

Many matters of great importance to those interested in medical progress will be considered and decided in the name of the State Society at the meetings of the Council and of the House of Delegates.

ARE YOU A FELLOW OF THE A. M. A.?

Only "Fellows" are permitted to register at the American Medical Association meetings. In order to become a Fellow, a physician must:

- Be a member in good standing, with dues paid up, of a County Medical Society;
- Be a member of a State Society;
- Sign the application blank for Fellowship in the A. M. A. This application must be certified by the secretary of the State Society;
- Pay his A. M. A. Fellowship dues of \$6.00 a year and hold his Fellowship card.

Some physicians write us stating they thought themselves Fellows of the A. M. A., because they subscribed to the Journal. This, of course, is an error. Anyone can subscribe for the Journal, but there is only one way to become a Fellow, and that is as described above.

There are in California over five thousand physicians who should be members of their county and State societies and Fellows of the A. M. A. Actually, there are about 3700 who are members of their local and State societies and about two

thousand who are Fellows of the national association.

During the convention, the A. M. A. will be prepared to issue Fellowship cards to all who hold membership in county societies.

Don't you think you should attend to this promptly?

FINANCING THE AMERICAN MEDICAL ASSOCIATION CONVENTION

The Central Committee estimates the expenses connected with this convention at \$24,490. This estimate is itemized as follows:

Rents	\$ 640.00
Telephone and telegraph.....	500.00
Postage	300.00
Office supplies	300.00
Printing and mailing	3000.00
Multigraphing and mimeographing	250.00
Salaries and wages.....	2100.00
Office equipment and typewriter rental	600.00
Printing and illustrating book..	6000.00
Badges	400.00
Auditorium changes and furniture	1000.00
Opening meeting (hall, music, decorations, refreshments)....	400.00
Tea—Tuesday, June 26	1800.00
Luncheon—Wednesday, June 27	2400.00
Transportation	700.00
Golf prizes	100.00
President's reception	4000.00
Total	\$24490.00

This information is given in answer to inquiries from a few members of the State Society as to what money was needed for. It will be noted in examining this budget that no provision is made for special expenditures in other parts of the State for local entertainment. The Finance and Central Committees feel that members throughout the State should contribute whatever they can to the treasurer of the Central Committee for the general purposes of the convention as outlined above. In making contributions, it is hoped members in certain sections where post-convention activities will be carried on will bear in mind the fact that they will be expected to contribute locally to their own committee for purposes of their own local entertainment—this should be taken into consideration in making donations to the Central Committee.

The response to the second letter sent out by the chairman of the Finance Committee recently and to the editorial in the April number of the Journal has been very gratifying. However, we are still very far short of the amount of money that has already been authorized by the Central Committee and which must be provided by those who are willing to do their share in money, if not in service. Please send your check promptly to John Gallwey, Treasurer, 808 Balboa Building, for whatever you feel you can give.

STATE SOCIETY

THE CALIFORNIA COMMITTEE ON ARRANGEMENTS

Many committees are active in efforts to make the American Medical Association convention a success. All committees will be published in full with names and addresses in "Medical California." The Central Committee is made up of officers of the State and county medical societies and of the chairmen of convention committees.

Officers and Executive Committee

William Everett Musgrave, General Chairman, 806 Balboa Building, San Francisco.
William T. McArthur, Vice Chairman, 836 Security Building, Los Angeles.
Ina M. Richter, Secretary, 408 Stockton Street, San Francisco.
John Gallwey, Treasurer, 177 Post Street, San Francisco.
Reginald Knight Smith, Chairman Finance Committee, 391 Sutter Street, San Francisco.

Central Committee

Ray Lyman Wilbur, President-Elect American Medical Association, Stanford University, Palo Alto.
Henry G. Brainerd, President State Medical Society, 1661 Orange Street, Los Angeles.
T. C. Edwards, President-Elect State Medical Society, 224½ Main Street, Salinas.
W. W. Cross, Second Vice-President State Medical Society, 1015 Mattei Building, Fresno.
William Ophuls, Dean of Stanford Medical School, 114 Walnut Street, San Francisco.
L. S. Schmitt, Acting Dean University of California Medical School, University of California Hospital, San Francisco.
Percy T. Magan, Dean of College of Medical Evangelists, 304 North Boyle Avenue, Los Angeles.
George E. Ebright, President State Board of Health, 209 Post Street, San Francisco.
Dudley Smith, President League for the Conservation of Public Health, Claremont Manor, Oakland.
Robert Pollock, President Southern California Medical Association, First National Bank Building, San Diego.
J. R. Snyder, President Northern Counties Medical Association, City Laboratories, Sacramento.
Howard H. Johnson, Associate Secretary California Medical Association, 1012 Balboa Building, San Francisco.
Saxton T. Pope, President (1922) San Francisco County Medical Society, 135 Stockton Street, San Francisco.
Donald J. Frick, President (1922) Los Angeles County Medical Society, 711 Van Nuys Building, Los Angeles.
E. E. Brickerhoff, President (1922) Alameda County Medical Society, First National Bank Building, Oakland.
W. W. Crawford, President San Diego County Medical Society, 401 Timken Building, San Diego.
G. P. Dillon, President Sacramento County Medical Society, 719½ K Street, Sacramento.
L. R. Johnson, President San Joaquin County Medical Society, Belding Building, Stockton.
Raymond Wayland, President Santa Clara County Medical Society, 140 North Third Street, San Jose.
G. W. Walker, President Fresno County Medical Society, Rowell Building, Fresno.
James H. Parkinson, Representing all other Northern County Society Presidents, 1601 I Street, Sacramento.
George H. Kress, Representing all other Southern County Society Presidents, 245 Bradbury Building, Los Angeles.
Pauline Nusbaumer, President (1923) Alameda County Medical Society, 2404 Broadway, Oakland.
W. H. Gilbert, President (1923) Los Angeles County Medical Society, Brockman Building, Los Angeles.
Sol Hyman, President (1923) San Francisco County Medical Society, Butler Building, San Francisco.
J. E. Jenkinson, President (1923) San Diego County Medical Society, Watts Building, San Diego.
Thomas F. Madden, President (1923) Fresno County Medical Society, 922 Mattei Building, Fresno.
Dewey R. Powell, President (1923) San Joaquin County Medical Society, Farmers and Merchants Building, Stockton.
F. C. Gerlach, President (1923) Santa Clara County Medical Society, 68 South First Street, San Jose.
Mariana Bertola, Chairman, Registration Committee, 1050 Jackson Street, San Francisco.
Rene Bine, Chairman, Committee on Commercial Exhibits, 350 Post Street, San Francisco.
Frank Hinman, Chairman, Committee on Scientific Exhibits, 516 Sutter Street, San Francisco.
Harry E. Alderson, Chairman, Committee on Entertainment, 240 Stockton Street, San Francisco.
Morton R. Gibbons, Chairman, Committee on Hotels, 350 Post Street, San Francisco.
Dr. Walter B. Coffey, Chairman, Committee on Convention and Post-Convention Diagnostic Clinics, 909 Hyde Street, San Francisco.

Alfred C. Reed, Chairman, Committee on Printing, 350 Post Street, San Francisco.
Reginald Knight Smith, Chairman, Committee on Finance, 391 Sutter Street, San Francisco.
John H. Graves, Chairman, Committee on Publicity, 977 Valencia Street, San Francisco.

General Reception Committee

This committee consists of all members of all other committees, as well as all officers and members of the California Medical Association.

All members of the General Reception Committee have been requested to wear a special badge during convention week and post-convention week. Visiting Fellows and guests are expected to ask for courtesies or assistance from any of the 4000 members of this committee.

Sections and Section Works

A. W. Hewlett, Chairman, Lane Hospital, San Francisco.
F. F. Gundrum, Chairman, Practice of Medicine, Capital National Bank Building, Sacramento.
Stanley Stillman, Chairman, Surgery (General and Abdominal), Lane Hospital, San Francisco.
L. A. Emge, Chairman, Obstetrics and Gynecology, Stanford University Hospital, San Francisco.
Howard McNaught, Chairman, Laryngology, Otolaryngology and Rhinology, Butler Building, San Francisco.
James Franklin Smith, Chairman, Ophthalmology, 86 Post Street, San Francisco.
Hugh K. Berkley, Chairman, Diseases of Children, 801 Brockman Building, Los Angeles.
Walter C. Alvarez, Chairman, Pharmacology and Therapeutics, 177 Post Street, San Francisco.
Walter V. Brem, Chairman, Pathology and Physiology, 1003 Pacific Mutual Building, Los Angeles.
James G. Sharp, Chairman, Stomatology, 135 Stockton Street, San Francisco.
Ross J. Moore, Chairman, Nervous and Mental Diseases, 520 West Seventh Street, Los Angeles.
Howard Morrow, Chairman, Dermatology, Butler Building, San Francisco.
William C. Hassler, Chairman, Preventive Medicine and Public Health, 1085 Mission Street, San Francisco.
Robert V. Day, Chairman, Urology, 412 West Sixth Street, Los Angeles.
G. J. McChesney, Chairman, Orthopedic Surgery, Flood Building, San Francisco.
Samuel H. Hurwitz, Chairman, Gastro-Enterology, 516 Sutter Street, San Francisco.
O. D. Hamlin, Chairman, Alameda County Hospitality and Clinic Committee, Federal Realty Building, Oakland.
Ernest L. Walker, Acting Director Hooper Foundation for Medical Research, San Francisco.
James T. Watkins, Chairman, Committee on Visitors from Foreign Countries, 909 Hyde Street, San Francisco.
Gayle G. Moseley, Vice-Chairman, Committee on Hotels, 333 Pine Street, San Francisco.
J. Wilson Shields, Vice-Chairman, Committee on Entertainment, 516 Sutter Street, San Francisco.
Howard Naffziger, Chairman, Committee on President's Reception, 291 Geary Street, San Francisco.
Charles D. McGettigan, Chairman, Committee on Clubs, 240 Stockton Street, San Francisco.
Harold A. Fletcher, Chairman, Committee on Outdoor Entertainment and Automobiles, 135 Stockton Street, San Francisco.
James Eaves, Chairman, Committee on Golf and Country Clubs, 560 Sutter Street, San Francisco.
Alfred L. Draper, Chairman, Committee on State, Section and Group Entertainment, 210 Post Street, San Francisco.
George Dock, Chairman, Committee on Medical Dinner, Chamber of Commerce Building, Pasadena.
Robert L. Porter, Chairman, Pediatric Section Dinner, 240 Stockton Street, San Francisco.
Millicent Cosgrave, Chairman, Women's Clubs and Civic Organizations, 350 Post Street, San Francisco.
W. P. Read, Chairman, Committee on Jefferson Alumni Dinner, Flood Building, San Francisco.
R. I. Longabaugh, M. C. U. S. Navy, Chairman, Committee on Mare Island Navy Yard and Naval Hospital Entertainment.
Walter B. Coffey, Chairman, Committee on Convention Clinics, 909 Hyde Street, San Francisco.
Edna L. Barney, Secretary, Committee on Convention Clinics, Children's Hospital, San Francisco.
Wallace I. Terry, Chairman, U. C. Hospital Committee on Clinics, Schroth Building, San Francisco.
Robert L. Porter, Chairman, Children's Hospital Committee on Clinics, 240 Stockton Street, San Francisco.
George B. Somers, Chairman, Lane and Stanford University Hospitals Committee on Clinics, Lane Hospital, San Francisco.
E. B. Frick, Chairman, San Francisco Hospital Committee, San Francisco Hospital.
Otto Westerfeld, Chairman, Franklin Hospital Committee, Schroth Building, San Francisco.
Thomas F. Nolan, Chairman, St. Mary's Hospital Committee, Flood Building, San Francisco.
F. K. Alnsworth, Chairman, Southern Pacific Hospital Committee, 65 Market Street, San Francisco.
L. J. Schermerhorn, Chairman, St. Luke's Hospital Committee, 516 Sutter Street, San Francisco.
E. O. Jellinek, Chairman, Mount Zion Hospital Committee, Butler Building, San Francisco.
George H. Juilly, Chairman, French Hospital Committee, 133 Geary Street, San Francisco.
B. F. Alden, Chairman, St. Francis Hospital Committee, 126 Post Street, San Francisco.
F. H. Rodenbaugh, Chairman, Mary's Help Hospital Committee, 516 Sutter Street, San Francisco.

A. S. Musante, Chairman, St. Joseph's Hospital Committee, 916 Kearny Street, San Francisco.

E. W. Cleary, Chairman, Hahnemann Hospital Committee, 177 Post Street, San Francisco.

J. H. Seymour, Chairman, Los Angeles County Hospital Committee, Brockman Building, Los Angeles.

George Thomason, Chairman, White Memorial Hospital Committee, Hollingsworth Building, Los Angeles.

Donald J. Frick, Chairman, Hospital of the Good Samaritan Committee, Van Nuys Building, Los Angeles.

John V. Barrow, Chairman, Methodist Hospital Committee, Chapman Building, Los Angeles.

Guy Cochran, Chairman, Children's Hospital Committee, Pacific Electric Building, Los Angeles.

Edward T. Dillon, Chairman, St. Vincent's Hospital Committee, St. Vincent's Hospital, Los Angeles.

E. C. Moore, Chairman, California Lutheran Hospital Committee, Merchants National Bank Building, Los Angeles.

W. Harriman Jones, Chairman, Seaside Hospital Committee, 131 Pine Avenue, Long Beach.

Charles D. Lockwood, Chairman, Pasadena General Hospital Committee, 295 Markham Place, Pasadena.

M. C. Harding, Chairman, San Diego County Medical Society, San Diego County General Hospital and St. Joseph's Hospital Committees, Timken Building, San Diego.

W. D. Ownes, M. C., U. S. Navy, Chairman, U. S. Naval Hospital Committee, U. S. Naval Hospital, Balboa Park, San Diego.

Mrs. J. E. Jennison, Chairman, San Diego County Women's Committee, 3774 Fifth Street, San Diego.

E. E. Endicott, Chairman, Amador County Hospital Committee, Jackson.

O. S. Stansbury, Chairman, Butte County Medical Society Committee, Chico.

George P. Cooper, Chairman, Calaveras County Hospital Committee, Angels Camp.

C. A. Poage, Chairman, Colusa County Hospital Committee, Colusa.

U. S. Abbott, Chairman, Contra Costa Medical Society Committee, Richmond.

Ernest M. Fine, Chairman, Del Norte County Hospital Committee, Crescent City.

W. A. Reckers, Chairman, El Dorado County Hospital Committee, Placerville.

Roland B. Tupper, Chairman, Fresno County Medical Society and Fresno County General Hospital Committee, Mattei Building, Fresno.

Frank M. Lawson, Chairman, Glenn County Medical Society Committee, Willows.

John A. Lane, Chairman, Humboldt County Medical Society Committee, Eureka.

L. C. House, Chairman, Imperial County Hospital Committee, El Centro.

F. J. Gundry, Chairman, Kern County Hospital Committee, Hopkins Building, Bakersfield.

J. A. Crawshaw, Chairman, Kings County Hospital Committee, Hanford.

Francis G. Gunn, Chairman, Lake County Hospital Committee, Kelseyville.

George P. Martin, Chairman, Lassen County Hospital Committee, Susanville.

Dow H. Ranson, Chairman, Madera County Hospital Committee, Madera.

William F. Jones, Chairman, Marin County Hospital Committee, San Rafael.

Gavin S. Scott, Chairman, Mariposa County Hospital Committee, Mariposa.

Samuel L. Rea, Chairman, Mendocino County Hospital Committee, Ukiah.

Edwin R. Fountain, Chairman, Merced County Hospital Committee, Merced.

C. M. Tinsman, Chairman, Modoc County Hospital Committee, Adin.

E. N. Reeves, Chairman, Monterey County Hospital Committee, Salinas.

Charles H. Bulson, Chairman, Napa County Hospital Committee, Napa.

William P. Sawyer, Chairman, Nevada County Hospital Committee, Nevada City.

R. A. Cushman, Chairman, Orange County Hospital Committee, Santa Ana.

Sidney K. Shipman, Chairman, Placer County Hospital Committee, Colfax.

Ernest C. Griner, Chairman, Plumas County Hospital Committee, Spring Garden.

H. R. Martin, Chairman, Riverside County Hospital Committee, 1023 Main Street, Riverside.

F. N. Scatena, Chairman, Sacramento County Medical Society Committee, 601 K Street, Sacramento.

Richard W. O'Bannon, Chairman, San Benito County Hospital Committee, Hollister.

H. W. Mills, Chairman, San Bernardino County Hospital Committee, Fourth and F Streets, San Bernardino.

B. F. Walker, Chairman, San Joaquin County Medical Society Committee, Elks Building, Stockton.

F. R. Mugler, Chairman, San Luis Obispo County Medical Society Committee, San Luis Obispo.

Wood C. Baker, Chairman, San Mateo County Hospital Committee, San Mateo.

Franklin R. Nuzum, Chairman, Santa Barbara County Medical Society Committee and Cottage Hospital Committee, Cottage Hospital, Santa Barbara.

James C. Blair, Chairman, Santa Clara County Hospital Committee, First National Bank Building, San Jose.

S. W. Dowling, Chairman, Santa Cruz County Medical Society Committee, People's Bank Building, Santa Cruz.

Ferdinand Stabel, Chairman, Shasta County Hospital Committee, Redding.

William A. Lavery, Chairman, Sierra County Hospital Committee, Loyalton.

H. H. Beck, Chairman, Siskiyou County Hospital Committee, Yreka.

A. V. Doran, Chairman, Solano County Hospital Committee, Vallejo.

Jackson Temple, Chairman, Sonoma County Medical Society Committee, Santa Rosa.

E. F. Reamer, Chairman, Stanislaus County Hospital Committee, Ramont Building, Modesto.

Truett P. Peery, Chairman, Sutter County Hospital Committee, Yuba City.

E. E. Thompson, Chairman, Tehama County Hospital Committee, Red Bluff.

D. B. Fields, Chairman, Trinity County Hospital Committee, Weaverville.

R. N. Fuller, Chairman, Tulare County Hospital Committee, Tulare.

George C. Wrigley, Chairman, Tuolumne County Hospital Committee, Sonora.

G. A. Broughton, Chairman, Ventura County Hospital Committee, Oxnard.

Fred R. Fairchild, Chairman, Yolo County Medical Society Committee, Woodland.

George W. Stratton, Chairman, Yuba County Hospital Committee, Marysville.

Mrs. Ray Lyman Wilbur, Chairman, Women's Central Committee, Stanford University.

Mrs. George Somers, Vice-Chairman, Women's Central Committee.

Mrs. J. E. Jennison, Chairman, San Diego County Women's Hospital Committee.

Mrs. Donald Frick, Chairman, Los Angeles County Women's Hospital Committee.

Mrs. Edward N. Ewer, Chairman, Alameda County Women's Hospital Committee.

Mrs. F. F. Gundrum, Chairman, Sacramento County Women's Hospital Committee.

Mrs. B. F. Walker, Chairman, San Joaquin County Women's Hospital Committee.

Mrs. H. L. Carpenter, Chairman, Contra Costa County Women's Hospital Committee.

Mrs. L. R. Wilson, Chairman, Fresno County Women's Hospital Committee.

Who Are Delegates to the State Society Meeting?

—The constitution and by-laws of the State Society, the charter issued by that society to the various county units, and the constitutions and by-laws of the county societies themselves, all provide definitely how representation in the House of Delegates is to be selected. Through years of loose practice, these definite constitutional provisions have been more and more ignored, until they are now about as effective as the Eighteenth Amendment to the United States Constitution. Of course, in a democratic organization this laxity probably is not of material consequence, but we should all remember that some time or another the question is liable to become important.

The only people who can legitimately under any circumstances vote in the House of Delegates are those delegates or alternates who have been selected for the purpose by their county societies and who have been properly certified to the secretary of the State Society. This provision of the constitution ought to be enforced or done away with. What usually happens is that a comparatively small percentage of properly elected and certified delegates or alternates attend the House of Delegates meeting, and at the last moment any members who happen to be present from the various county societies are permitted to take their seats and to legislate in the name of the State Society. This is not good practice from the standpoint of the individual welfare of the physicians of the State.

Acting Associate Secretary—The Council at its last meeting authorized the Secretary of the State Society to devote his entire time to the Convention of the American Medical Association. The Associate Secretary was instructed to assume the duties of Acting Secretary. Doctor Johnson has been ill in the hospital for some months and is not likely to return to duty for some time.

The serious situation created by this combination of circumstances has been considered by the Publicity Bureau, and they have induced Doctor Emma W. Pope to temporarily help out as Acting Associate Secretary. On behalf of Doctor Emma W. Pope, the full co-operation and support of all officers and members is invited.

Southern California Medical Society

Reported by Egerton Crispin, Secretary, Pacific Mutual Building, Los Angeles

The sixty-eighth regular semi-annual meeting of the Southern California Medical Society was held at the Virginia Hotel, Long Beach, on Friday and Saturday, the 6th and 7th of April. The sessions were well attended. In the absence of the President, Robert Pollock of San Diego, the first vice-president, Francis L. Rogers of Long Beach, presided through the sessions.

The presentations of clinical observations by A. W. Hewlett, Professor of Medicine at Stanford, and by Thomas Addis, Clinical Professor of Medicine at Stanford, on Friday evening were well received by a large and closely attentive audience. George Dock, the Saturday evening speaker, gave a scholarly address on the development of medicine through the period of superstition and empiricism to the present time with its continued effort to place medicine on a more scientific basis.

The first paper of the Friday afternoon session was by A. D. Butterfield of National City on "The Application of the Broad Principles of Physiotherapy," who emphasized physiotherapy as an established therapeutic division of medicine.

"Physiotherapy is the use of nature's forces, such as light, heat, air, food, water, and exercise in the treatment of disease. For many years faddists have taken one or more of these therapeutic agents and have endeavored to make a 'cure-all' system of practice. From these much abused agencies, an earnest endeavor is now being made to establish their true scientific value." Discussion by A. Gottlieb and Gustav Biorkman of Los Angeles, H. J. Andrews of Hollywood, and Frank Mikels of Long Beach.

A. B. Wessels and Harold Cornell of San Diego presented a paper on "Some Observations Upon Diseases of the Accessory Sinuses" which was discussed by John Mackenzie Brown and C. H. Montgomery of Los Angeles.

"The Advisability of Urologic Examinations in Obscure Abdominal Pain" was presented by Leon Watkins of Los Angeles and discussed by Henry Shaw, C. P. Thomas, Robert Day, O. O. Witherbee and Walter Brem of Los Angeles.

Burns Chaffee of Long Beach, with a paper on "Acute Intestinal Obstruction," reviewed the experimental work done on acute intestinal obstruction, placing emphasis on the laboratory findings that aid in arriving at an early diagnosis, and urging that surgical interference be adopted in the presence of minimum symptoms rather than to always wait until a positive diagnosis is made." Chaffee's paper brought out an interested discussion by F. J. Colbert, William Duffield, C. P. Thomas, O. O. Witherbee of Los Angeles and Philip Savage of San Bernardino.

"Training of the Neurasthenic" was the subject of a paper presented by H. Douglas Eaton of Los Angeles, in which he said that the "confusion in the etiology and pathology or lack of pathology of neurosthenia has led to loose methods in handling neurasthenics. Whatever theory in this regard the physician may hold, his treatment of neurosthenia will not be permanently successful unless it covers individual mental and physical training carried out under his close supervision." Following the general part of his paper Eaton presented his own suggestions and methods for this training. Discussion was participated in by Ross Moore, Paul Bowers, and James Percy of Los Angeles.

Friday Evening

Thomas Addis in presenting clinical observations and studies on "Bright's Disease" illustrated by

lantern slide graphs and charts said, "In all of the variety of diseases combined under the term bright's disease the determination of the nature and of the extent of the renal lesion is of great importance in prognosis and treatment. Direct information as to the nature of the renal lesion can be obtained by a systematic study of the urinary sediment if certain conditions essential for the formation and preservation of casts are observed. The extent of the lesion can be determined by measuring the ratio between the rate of urea excretion and the concentration of urea in the blood. Under certain special conditions the magnitude of this ratio varies with the amount of normal secreting renal tissue. Using the results of such methods of examination as a standard, it has been found that in many points which are of great clinical importance fairly accurate approximations to the actual facts may be obtained by the use of such simple laboratory methods as can be utilized by the practitioner in his office."

A. W. Hewlett presented a series of observations illustrated by lantern slide charts and graphs on "The Clinical Significance of Vital Capacity Measurements" in which he discussed "the vital capacity of normal men and women in relation to height, weight and body surface." The height standard was used in the study which Hewlett presented which consisted of a statistical study of four hundred male patients in whom cardiac disease was suspected. The relation of vital capacity to diseases of the thorax was discussed on the basis of this study and of the reports in the literature."

Saturday 9 a. m.

The first paper of this session was presented by Thomas O. Burger of San Diego on the "Advantages of the Radical Operation for Hernias Under Local Anesthesia." Discussion by Charles Phillips of Los Angeles and Sidney Burnap, C. P. Thomas, O. O. Witherbee, and H. J. Andrews.

Francis L. Rogers of Long Beach presented a paper on "Membranous Croup: Diphtheritic and Non-Diphtheritic" in which he said, "They are distinct diseases with certain symptoms and treatment the same in both. Each has distinctive diagnostic symptoms if seen early—an analysis of same and salient points are given. Preventive medicine is an adjunct in true croup. Public Health and Public Welfare nurse service in the public schools. The use of the Schick test and toxin-antitoxin as a follow-up measure. The unsanitary rural home and environs in non-diphtheritic croup and the diphtheria carrier in all communities as factors. The present death rate in both types—is a menace, a disgrace and a subject for drastic criticism of Health Departments, the medical profession and general public. The early use of two available means of treatment; antitoxin in large doses and intubation will save practically one hundred per cent of both types.

"Much of the local treatment used in the past was not only useless but harmful. Health officers, accredited hospital staffs, and all other medical agencies should actively co-operate in teaching prophylaxis and the value and importance of early diagnosis and treatment. The day and night schools for adults can and should be available for the spreading of such needed public health information." This paper was discussed by F. H. Linthicum of Los Angeles.

John V. Barrow and Edward Franklin presented a paper on "Emetin in the Treatment of Typhoid Fever" in which they discussed "Treatment of Typhoid Fever with Emetin Hydrochloride" and presented a clinical study of one hundred cases with special reference to: (a) protozoa as a complication, and (b) the Widal Haemoclastic reaction as a valuable diagnostic sign. They also presented "comparative tables featuring one hundred cases in which no emetin was used."

This study was discussed by Walter Brem. Lack of time caused the president to limit what bade

fair to be animated discussion and to proceed with the program.

"X-ray Therapy." A Symposium; Covering the Treatment of Skin and Superficial Lesions; Glands and Blood Diseases; Treatment of Neoplastic Disease from Pathologic Standpoint and "Deep Therapy" was presented respectively by Raymond Taylor. William Bowman, who discussed under the "Roentgen Treatment of Skin Lesions" the types of ray that are used, hard, soft, filtered and unfiltered. The dosage and methods of measuring. The technique of applying ray. The dangers: X-ray reactions and reactions following application of drugs following treatment. The types of lesions benefited by treatment are malignant and non-malignant.

Rex Duncan and Albert Soiland. In Soiland's absence because of illness his paper was read by Costolow, his associate. His article "Dealt briefly with the writer's experience during the past year in the clinical use of short wave X-rays, otherwise known as deep roentgen therapy. He felt that enough data has been collected to venture an opinion as to whether or not earlier claims for this treatment have been substantiated."

Roland Skeel of Los Angeles presented the last paper of the morning session on "Acute Appendicitis: The Factors Promoting Recovery with and without Operation." Skeel's paper was discussed by Maurice Kahn and C. P. Thomas.

Saturday 2 p. m.

Following the transaction of business and the election of new members William Happ of Los Angeles presented the first paper of the session on "The Nature and Treatment of Anemias of Infants and Young Children" in which he gave "A classification of the anemias in infancy and childhood. Primary or pernicious anemia is very rare, the anemias being practically all of the secondary type. The peculiarity of the reaction of the infantile haematopoietic system to anemia, in responding with active regeneration and the output of immature forms must be kept in mind in interpreting the blood disorders at this period. The so-called von Jaksch's anemia is not a clinical entity but a secondary anemia. The treatment consists in determining and removing if possible, the underlying cause, and in the general measures useful in anemia. Transfusion is a valuable adjunct in severe cases." Happ's paper was discussed by Cleon Mason of Long Beach, R. C. Sharp of San Diego.

"Splenomegaly With Anemia" was the title of an interesting study by Hilmar O. Koefod, Santa Barbara, this supplemented by a case report and lantern slides showing a gross thickening of the skull in the subject (a child) and which Ullman called a "Leontiasis Ossia," perhaps occurring concurrently in the patient who was the subject of the study presented by Koefod.

Ernest Marshall Johnstone of Pasadena in presenting "Splenectomy: Its Scientific Basis and Therapeutic Value," illustrated by lantern slide graphs and charts, said, "Splenectomy is an old and fairly frequent operation, yet its performance has been without definite scientific foundation. Of late years great progress has been made toward a rational basis for splenectomy by experimental work on animals and careful clinical observations for several years after removal of the spleen. Of the many blood, marrow, lymph gland, etc., changes which follow splenectomy, the two most important facts which indicate a real therapeutic value are, first, the greatly increased activity of the marrow in producing red blood cells, and second, the decreased fragility of these cells." Johnstone's paper was discussed among others by Walter Brem, George Dock, and A. S. Lobingier of Los Angeles and Rexwald Brown of Santa Barbara.

"The Treatment of Diabetes With Insulin" was presented to a most interested audience. This work was done by W. D. Sansum, N. R. Blatherwick, Ph.D.; M. Louise Long, M.S.; Elsie Hill, A.B.;

and L. C. Maxwell, B.S., and presented by N. R. Blatherwick, Ph.D., who discussed "The Preparation and Properties of Insulin," and W. D. Sansum, who presented the clinical observation. They said in part, that they had treated ninety patients suffering from severe diabetes, with insulin and illetin. Their clinical records show that in a large majority of these patients the disease had reached that degree of severity where they could no longer be kept free from sugar and acidosis, even if maintained continuously at bed rest, since their tolerance were sufficient to permit the lowest possible maintenance diets. Two out of five patients already in coma survived. Gains in weight as high as thirty-five pounds were reported.

They believe that no patient or physician who has not acquired a thorough knowledge of dietetics should be entrusted with the use of insulin. They sum up the principles of insulin treatment as follows:

1. The patient's natural tolerance should be determined in grams of sugar-formers.
2. The exact value of the proposed diet should be known.
3. The sugar-burning power of the insulin in grams per c.c. should be known.
4. The dosage of insulin may be adjusted to make up the difference between the sugar-formers of the proposed diet and those of the patient's natural tolerance.

The last paper of the afternoon session was by Andrew Stewart Lobingier of Los Angeles on "Some Problems in the Infection of the Gall Bladder and Bile Ducts" in which he discussed:

(1) Chronic cholecystitis is usually associated with chronic cholangitis, especially where partial obstruction to the outflow of bile may exist.

(2) This retardation holds up a large reservoir of toxic bile and the absorption through the mucosa of the hepatic ducts quite over-shadows in its consequence that from the mucosa of the gall-bladder.

(3) Delay in this stasis of toxic bile in the hepatic ducts and gall-bladder produces destructive changes in the myocardium as first emphasized in this country by Babcock.

(4) There is convincing evidence that the nervous system, central and splanchnic alike, suffer serious functional disturbance from this toxemia.

(5) The principle of adequate and bile drainage should govern in the treatment of these cases.

The discussion of this live surgical problem was opened by Rea Smith of Los Angeles.

At 6:15 about two hundred and fifty members and their guests assembled at dinner in the north dining room. Percy Magan, the after-dinner speaker, in well chosen words gave to an appreciative audience, ideas, born of experience in handling students, on "Moral Influence in the Training of Physicians."

Saturday Evening

George Dock in presenting a semi-popular talk on the "Art and Science of Medicine" gave an account of the origin of modes of healing, showing the persistence of the same ideas of the nature of disease and the means of removing it all through many centuries, including the use of plants and minerals, animal organs and mysterious constructions. He told how among the immense number of means tried, some proved of value, but even those still need investigation. He went on to describe the study of disease; how progress went hand in hand with the discoveries in biology and the physical sciences; how the nature of disease has been made clearer; the causes of disease made known; and from some recent examples showed the promise of the future, which includes not only prevention of much disease, but a more certain aid when it does come.

Excerpts of papers presented in the report of the Society's meetings are from typed abstracts furnished by the authors.

COUNTY NEWS

ALAMEDA COUNTY

Samuel Merritt Hospital Accredited by American Medical Association—The Samuel Merritt Hospital, Oakland, has been placed on the list of hospitals approved for intern training by the Council on Medical Education and Hospitals of the A. M. A., having been notified of their accredited standing in the following letter from that Council:

"In accordance with the recommendation of the hospital committee of your State medical society, and in recognition of the splendid work and continuous improvement in progress in the Samuel Merritt Hospital, it is the pleasure of the Council on Medical Education and Hospitals to recognize your hospital as a proper hospital for the training of interns in the fifth year in medicine.

We trust that continued advancement may be your lot, and that you will always remember that we stand ready to give every assistance that will in any way make for the betterment of service, either in the care of patients or in the important work of training medical graduates.

A notice of this recognition will be published in an early number of the Journal, as well as in other publications of the American Medical Association.

Will you kindly bring this notice to the attention of the staff, the board of directors, and others who will be similarly interested?"

FRESNO COUNTY

Fresno County Medical Society (reported by John D. Morgan, secretary)—The regular meeting of the Fresno County Medical Society was held on April 3, with forty-four members present. Guests were Thomas Addis of San Francisco and H. O. Collins, Eckhart, Boudin, Fate, McClure, and Stewart.

Albion W. Hewlett, professor of medicine of Stanford Medical School, gave a clinic on Disease of the Heart and Circulatory System. Among other conditions, Hewlett presented and discussed the following: open ductus arteriosus, aortic stenosis, aneurism of aorta.

KERN COUNTY

Kern County Medical Society (reported by P. J. Cuneo, secretary)—The Society convened in regular session at Kern County General Hospital Thursday evening, March 15, with George Sabichi presiding, and one of the best attendances for some time. Dr. Veon was selected to arrange for our April meeting.

S. C. Compton presented interesting clinical cases. Hamlin presented the paper of the evening, his subject matter being "Acute Infections of the Accessory Air Spaces"; McKee lead in the discussion that followed; Hawkins gave an interesting, instructive paper; Schaper followed with demonstration of the early diagnosis of pulmonary tuberculosis.

The meeting then adjourned to our usual enjoyable supper, concluding a splendid evening.

LOS ANGELES COUNTY

(Report by Committee on Medical Education)

Los Angeles County Medical Association—The University of Southern California contemplates the establishment of a medical school as a department of the University. They requested the endorsement of the County Medical Society. The following interesting and informative report has been submitted by a committee as follows: Walter Brem, chairman; Donald J. Frick, Theodore Lyster, Percy Magan, W. A. Beckett, Sydney Burnap, Wayland Morrison, Charles D. Lockwood, George Dock,

Jarvis Barlow, William H. Gilbert, president; Harlan Shoemaker, secretary-treasurer.

Mr. Chairman and Members of the Committee on Medical Education:

Complying with your instructions, the sub-committee appointed at your first meeting has met and begs to submit herewith its report based upon the following premises:

I. The University of Southern California desires to establish a medical school in the city of Los Angeles.

II. The University of Southern California wishes the approval and support of this project by the Los Angeles County Medical Association.

III. It is the function of this committee to present for your consideration its recommendations as to the kind of medical school which would deserve your endorsement, together with such additional facts as seem pertinent to the question of medical education and the improvement of the medical service in this community.

We believe it is the birthright of the medical school to be wanted by:

1. The community in which it is to be established.

2. By the outstanding medical organization in the community.

3. By a university of good standing in educational circles.

4. By certain bodies whose activities are wholly or closely identified with the conduct and advancement of medical education, such as:

(a) The Council of Medical Education of the A. M. A.

(b) The Association of American Medical Colleges.

(c) The Carnegie Foundation.

(d) The General Education Board.

(e) The Rockefeller Foundation.

If the need of a medical school in a community is agreed upon by these various groups their moral and to some extent their financial support may confidently be counted upon, provided the program for the new school gives proper assurance of the founder's intention and ability to create and operate a Grade A school which shall conform, in terms of administration, organization, personnel, equipment, curriculum and hospital affiliations, to the best practice among the leading medical schools of the country.

Any attempt to operate a medical school which could not secure a Grade A rating by the Council on Medical Education of the A. M. A. we should look upon as prejudicial to the best interests of the local medical profession, to medical education, and to any students who might enroll in such an institution.

It has been reported without contradiction in the local papers that it was the intention of the University of Southern California to accept matriculates for the degree of Doctor of Medicine this coming September. It is our hope and our belief that this news item was without justification in fact, for it is inconceivable to us that such a course could eventuate in anything but disaster.

The complexity of modern medical education, the great expense which it entails, the difficulties which surround the task of assembling a competent faculty, the developing of a modern curriculum, the correlation of departmental activities, the securing and controlling of hospital affiliations, the creation of an adequate reference library and pathological museum, as well as the completion of a hundred other tasks essential to the proper administration and organization of a medical school would seem to offer ample reason for deferring the opening of a school until proper provision could be made for handling these varied and difficult problems.

The necessity of maintaining the standards in medical education first created by the survey of the Carnegie Foundation and ably developed their present state by the Council on Medical Education of

the A. M. A., must be obvious to all who are familiar with the work of these boards.

The far-reaching results of their efforts is reflected in the medical legislation which the various States have enacted. Already 73 per cent of the State licensing boards require the pre-medical education as prescribed by the A. M. A., and today diplomas from schools receiving a low A. M. A. rating are reported as not recognized in from forty to forty-six States.

The obvious handicap which a student incurs in graduating from any other than a Grade A school, to say nothing of lessened opportunity which he has of receiving an adequate preparation for his life's work, would indicate that a student who would knowingly select a low-rated school would not seem to be actuated by motives which are likely to insure his being an asset to his profession or to the community in which he settles.

The question of establishing a medical school in Los Angeles is so closely identified with the larger problem of a medical center that any consideration of the one naturally involves the other.

That a large medical center will ultimately be required to provide the people of this city and surrounding country with all the advantages which modern science now offers is obvious to all. Such a center should make provision for:

- (a) The care of the sick and injured.
- (b) The teaching and practice of preventive medicine.
- (c) Undergraduate teaching.
- (d) Graduate teaching.
- (e) Research in all branches of the medical science.
- (f) Training of nurses and public health workers.

A medical school with its associated teaching hospitals is the logical nucleus about which such a center should develop, and it is, therefore, of the utmost importance that the character of such a school should command the confidence of the leaders in medical education throughout the country.

An exceptional opportunity presents itself to those who are seriously and unselfishly interested in improving the medical service in this locality.

Even a cursory review of the present situation reveals a rapidly growing city and surrounding country, inadequate hospital facilities, no permanent quarters for the county's most important medical organization, deficient library facilities, no opportunity for many qualified men to continue or engage in important research problems which they are interested in, hospitals and staffs operating under conditions which involve great economic loss, no established clinics to which members of the profession from this or adjoining States may profitably come and witness new methods of technique, treatment or diagnosis, a university anxious to found a medical school, and finally, nearly if not all of the important interests back of medical education the country over have recognized and expressed the urgent need for a big constructive medical development in this city.

May we not capitalize this situation to the great advantage of the cause of better medicine and to the great good of the city of Los Angeles by uniting all of the various interests that are involved in an effort to attain a common goal.

It is the belief of this committee that once the advantages that would accrue to each institution, through participation in such a movement, are fully understood that there will be little difficulty in securing their co-operation.

Conclusions

1. The indorsement of the proposed medical school by the Los Angeles County Medical Association should be contingent upon the assurance that it will receive a Grade A rating from the outset.

2. A survey of the local medical facilities and an estimate of the future needs of the city and sur-

rounding country would be of inestimable value in giving proper direction to any new developments.

3. The establishing of an office with a competent personnel and under expert direction which could serve as a clearing house for data on medical schools, hospitals, dispensaries, public health, industrial, medicine, vocational training, including administration, organization, building and equipment, would supply the necessary information upon which to base many important decisions.

4. Liaison should be established with all of the important medical centers throughout the world.

5. It would seem proper for the Committee on Medical Education of the Los Angeles County Medical Association to take the initiative in an effort to unite all interests in a common cause and thus take a first and most important step towards the consummation of the medical development which we all so earnestly desire.

Barlow Medical Library—The fifteenth annual report of the work of the Barlow Medical Library, Los Angeles, shows that the usefulness of the library increases with each succeeding year. The library membership has grown to 190, with a gain of fifty-nine new members this year.

California Lutheran Hospital Accredited by American Medical Association—The California Lutheran Hospital, Los Angeles, has been placed on the list of hospitals approved by the Council on Medical Education and Hospitals of the A. M. A., for the training of interns, according to the following letter received by the hospital from the Council:

"In accordance with the recommendation of the hospital committee of your State medical association, and in recognition of the splendid work and continuous improvement in progress in the California Lutheran Hospital, it is the pleasure of the Council on Medical Education and Hospitals to recognize your hospital as a proper hospital for the training of interns in the fifth year in medicine.

We trust that continued advancement may be your lot, and that you will always remember that we stand ready to give every assistance that will in any way make for the betterment of service, either in the care of patients or in the important work of training medical graduates.

A notice of this recognition will be published in an early number of the Journal, as well as in other publications of the American Medical Association.

Will you kindly bring this notice to the attention of the staff, the Board of Directors, and others who will be similarly interested?"

New Administrative and Hospital Building at Soldiers' Home, Sawtelle—According to press dispatches, work has already begun on the new administrative and hospital building at the Soldiers' Home, Sawtelle. The new structure will be located directly between the present hospital annex buildings and will conform in architecture to the other wings. Administrative offices, laboratory, X-ray rooms, cafeteria, and kitchen will be included in the new unit. Patients, at present housed in temporary quarters, will be moved into the new building upon its completion, which is expected to be about the middle of June.

Pasadena's Municipal Isolation Hospital—Work is progressing on the municipal isolation hospital now being erected on South Marengo Avenue, Pasadena, on land owned by the Municipal Water Department, according to news items in the press, and will probably be completed within the next month or six weeks at a cost of \$15,000. The hospital will have rooms for eight beds; also baths and accommodations for nurses. The plans for the hospital were prepared by Myron Hunt, architect, and it is stated that the building will be of first-class construction throughout.

MONTEREY COUNTY

Monterey County Medical Society (reported by T. C. Edwards, secretary)—One of the best meetings in the history of the Monterey County Medical

Society was held in Salinas on the evening of April 6.

Eugene S. Kilgore of San Francisco filled the program for the evening. His subject was "Modern Treatment of heart Diseases," and was illustrated with lantern slides, accentuating certain points in the course of the talk. Several questions were asked by the members and answered by Dr. Kilgore.

We would suggest that more programs of county societies, given by invited physicians, might help to instill life into societies that need an awakening. Opportunities to have special physicians give special programs are published in the Journal every few months.

Monterey County Society has made arrangements to have a physician or surgeon of note at all of its meetings this year.

C. H. Halliday, the newly appointed "full time" health officer for Monterey County, was present and gave an outline of the work contemplated by him and asked that the members of the Society co-operate with him in his work.

A motion was passed by the Society calling the attention of the municipalities of the county to the advisability of having Dr. Halliday take up the health work in the cities, thus co-ordinating all the public health activities of the county.

SAN BERNARDINO COUNTY

San Bernardino County Medical Society (reported by E. J. Eytinge, secretary)—The Society met at the San Bernardino County Hospital on April 3, with thirty members and twenty guests present. The program consisted of:

1. Demonstration and discussion of two cases of: a. Nephrolithiasis. b. One case of Tuberculosis of the Genital Tract in the Male. By E. J. Eytinge. c. Microscopic Findings, and Slides. By L. D. Campbell. Discussion opened by C. G. Hilliard.

2. Urology in Children. Illustrated by lantern slides. By A. B. Cecil of Los Angeles. Discussion opened by J. A. Shreck.

Attention was called to the State Indemnity Defense Fund. Delinquent members, according to the Coverage Rules, are not protected during their period of delinquency.

SAN DIEGO COUNTY

St. Joseph's New Hospital—Towering high in the field of San Diego's present progress is the new St. Joseph's Hospital. Within this month its plans will be completed, and the actual building begin. It is the ambition of the Rt. Rev. Bishop and the Sisters of Mercy to place in the heart of San Diego a hospital embracing the latest and finest details in modern substantial and well-planned construction. The predominant aim is particularly to make it one of the best planned hospitals of the country, giving to the sick and the suffering every convenience and comfort that invention and thought have made available.

The five-acre site for the new structure lies beyond the end of Fifth street, about six hundred yards northwest of the present hospital. The approach will be by Hillcrest Drive, terminating in an oval containing a fountain and flower gardens. The building will stand six stories high on the brow of Mission Hills; the main structure, 260 feet long and forty-four feet wide, will face the west and be flanked on either side by wings one hundred feet long and forty feet wide projecting westward. The general style will be Spanish mission style with stucco finish. The construction is to be Class A, reinforced concrete with tile filler walls, absolutely fireproof, and a basement underneath the whole building.

The capacity will be 150 beds, with provision for future expansion. There will be an equal number of single and double rooms, but no wards. Each room will have its individual lavatory and cloak-closet, and will be equipped with a nurses' silent

signal system with a checking enunciator. This will enable the superintendent of nurses to note, without leaving her office, all the calls for a nurse's service throughout the hospital, and to know the moment each call is answered. A modern doctors' call system will also be installed.

On the first floor the main entrance will be into a spacious lobby suitably planned to eliminate what might seem bare and institution. This has its large open fireplace. On this floor will be the administration department; also the outpatient department in which is included a modern dispensary, medical examination, eye, ear and throat rooms, social service room, and waiting room. Also here will be found the ambulance receiving room with surgical dressing room, etc. In connection with the administration department on the main floor are the business and private offices, doctors' rest room with bath, the superintendent of nurses suite, with bath, record room, public waiting-room, and phones.

Off the main floor, in a separate central wing, is the domestic service department, containing a main kitchen, a main serving room, help and maids' dining rooms, equipped cafeteria style. The basement of the kitchen will contain a modern refrigerating plant, including an ice-making machine, various cold storage rooms, vegetable preparation rooms, and a butcher shop. The basement under the main building will contain the nurses' and staff's dining rooms, a complete therapeutic suite, a nurses' rest and locker room, psychopathic room, auxiliary store rooms and vaults, a sterilizing suite, an autopsy suite, etc. From the refrigerating system in the basement water will be distributed to the various drinking fountains on all floors.

The second and third floors will contain private rooms and baths (single and double), various utility and sink-rooms, general bathrooms, special nurses' locker-rooms, diet kitchens, special diet-room, and two solariums on each floor.

The fourth floor will be given over to the obstetrical department which will be thoroughly modern in every respect, containing delivery rooms, husband's room, sterilizing room, and a large well-lighted nursery with airing-balcony and equipped with a washroom, linen dryers, blanket warmers, linen closet, doctors' room, labor and receiving rooms.

The operating department will occupy the fifth floor. Around the central operating foyer will be located the major and minor operating rooms, surgeons' scrub-up room, nurses' room, dressing and utensil room. This department will also contain anasthetizing and recovery rooms, a complete pathological laboratory, an X-ray operating suite of rooms with dressing rooms, etc. Some private rooms for patients will also be located on the fifth floor.

The sixth floor will be given over entirely to the Sisters' living quarters, containing a chapel, a community room, refectory, serving room, bedrooms, and roof garden.

The plans for general service aim at maximum efficiency. Food will be prepared in the main kitchen and sent to the diet kitchens on various floors by means of an automatic electric dumb-waiter, thence to be distributed from those kitchens on each floor to the patients. A passenger elevator will serve all floors, while an automatic electric bed elevator will give its special service to the surgical department.

A complete power house, to be erected northwest of the main building, will provide high pressure steam for the various sterilizers; also for a low-pressure vacuum heating system to heat the whole institution. The power house will also contain vacuum cleaning apparatus. A general incinerator will be provided in the vicinity of the power house. A new, thoroughly modern laundry and nurses' home are contemplated.

The plans for San Diego's hospital were drawn

by I. E. Loveless, architect. With such an institution built and located, as it will be, on a quiet, restful site overlooking the famous Mission Valley, and placed in the care of the gentle Sisters of Mercy, there is little to be desired for California's first and most southern city.

SAN FRANCISCO COUNTY

San Francisco County Medical Society (reported by J. H. Woolsey, secretary)—During the month of March, 1923, the following meetings were held:

Tuesday, March 6, Committee on Medicine—The present status of the treatment of leprosy. H. T. Hollman, formerly Director U. S. Leprosy Investigation Station, Honolulu.

Tuesday, March 13, General Meeting—Symposium on Allergy or Foreign Protein Sensitization. Anaphylactoid phenomena, P. J. Hanzlik; allergy in asthma and hay-fever, S. H. Hurwitz; allergy in eczema and urticaria, G. D. Culver.

Tuesday, March 20, Committee on Surgery—Head injuries—discussion of a new pathological group. H. C. Naffziger; surgery of the gall-bladder, Sterling Bunnell.

Tuesday, March 27, Committee on Eye, Ear, Nose, and Throat—Clinical meeting at the University of California Hospital.

Proceedings of the Eye, Ear, Nose, and Throat Section of the San Francisco County Medical Society, February 27, 1923, E. F. Glaser presiding (reported by F. Cordes, secretary)—Wallace B. Smith presented a paper on observations on practice of per-oral endoscopy. The paper was preceded by a brief history of the subject. Smith pointed out the necessity of a good organization in the operating room, emphasizing the fact that personal supervision of details is necessary, especially in an operating room where the personnel is changing. In children he does the procedure under ether anesthesia preceded by atropine, while in adults scopolamin and morphine usually suffice. Great emphasis was placed upon the proper position so as to make the approach easy. Ordinarily, the grasping forceps suffice, but occasionally a hook is necessary as in the case of a small rusty collar button or half a roasted peanut. The complication to be feared is that of subglottal edema, especially in children and babies. This can usually be avoided by skillful application, while unskilled manipulation, too large a tube, or too long a time may cause this complication and necessitate tracheotomy.

The attempted removal by unskilled men with improper instruments was especially condemned. The future will develop more qualified men, and the profession will become better educated to early reference of cases to the proper men.

In the discussion, Graham was interested in the additional use of scopolamin. He pointed out that the edema may be due to dilatation, but as Jackson points out, peanuts, probably because of the oil, are more apt to cause it.

Price condemned the feeding of mush, etc., in cases of a foreign body in the oesophagus in an attempt to dislodge them, as this may dislocate the foreign body to a more dangerous position. Cohn brought out the necessity of trained assistants.

Hebert told of the necessity of the X-ray; stated that Jackson did not use an anesthetic in children.

F. Cordes presented a paper on lupus vulgaris with ocular extension. The patient, over a period of nine years, developed a lupus that involved the lids and globe. Microscopic examination of the globe showed epidermoid corneal epithelium together with tubercles of the limbus and sclera. In the comment, he pointed out the severity of the disease and its marked destructive action in the lids and globe.

H. B. Graham's paper was on tuberculosis of the ear. The case reports are infrequent, due to lack of diagnosis in many cases, the positive diagnosis being difficult. Tuberculosis of the middle ear is

primarily a disease of the mucous membrane. Five distinct types are recognized:

1. The lipid form in which there is a slow process that may extend over years. It is similar to that of the nose and throat, in many cases being a direct extension. There is no discharge, the only symptom being deafness.

2. In the second type there is an infiltration of the entire drum followed by a marked destructive ulceration. The multiple perforations described in text-books are late stages of this type in most cases. Multiple perforations are, however, not pathognomonic of tuberculosis.

3. The third type is a rare, obscure, fibrinous one. On the promontory wall there is a thick yellowish deposit in which the tubercle bacilli are found. The process usually clears with removal of the fibrosis.

4. The fourth, a polypoid type, may fill the entire middle ear. There is very little secretion and the process heals with removal of the tissue.

5. In the fifth type, the ulcerative one, there is a breaking down with spread of the ulceration from the start. This is the destructive type that may cause mastoid involvement.

The lack of pain, multiple perforation, early interference with the labyrinth, deafness with low tones retained, early incidence of facial paralysis, any of these findings should lead one to suspect tuberculosis.

Graham thinks that in most cases the infection is through the tube and that the human tubercle bacillus is responsible.

In the discussion Cohn pointed out the difficulty in obtaining the tubercle bacilli in a smear even though guinea pig inoculation may be positive. Dr. Welty emphasized the value of solid silver nitrate in the treatment of these cases.

L. S. Mace read a paper on tuberculin in tuberculous iritis. He brought out that the condemnation of tuberculin is due to its improper use. In a patient in which the active process has loaded the system with the toxin, tuberculin is of no value. Tuberculous iritis is a disease of focal origin and depends on absorption of toxins as well as metastatic inflammation. Certain forms of laryngitis, various neuralgias, and stomach symptoms belong to this class. It is necessary to study each case to uncover the lung focus. The next step is to find the specific reaction to tuberculosin. The choice of tuberculin is important, Mace obtaining the best results with the old tuberculin of Koch. The reaction must be watched carefully so as to be able to grade the treatment dosage properly. Iritis is not a local affair so that one must consider the general condition. This was illustrated by two cases. The type of tuberculosis that causes eye symptoms is the type best treated with tuberculin.

Otto Barkan pointed out that before the advent of tuberculin these patients did well on general care. So that tuberculin must be regarded as an aid where the proper hygienic treatment is not available. F. Cordes told of the results obtained at the University of California Eye Clinic in these cases under Mace's treatment.

Mace in closing emphasized the necessity of general care. In some cases where this has no effect tuberculin has been found very helpful. It is not a cure-all, but has a definite place in therapy. Its use is not that of a foreign protein alone, as these do not give a specific reaction.

Hahnemann Hospital Accredited by Council on Medical Education and Hospitals of A. M. A.—Upon the recommendation of the California Committee of the Council on Medical Education and Hospitals of the A. M. A., Hahnemann Hospital has been accredited by that body for intern purposes, and have been so notified in the following letter from the Council:

"We have received the recommendation of Dr.

W. E. Musgrave, together with other evidence of your progressive attitude and substantial improvements, and are pleased to say that your hospital has been placed on the list of hospitals approved for the training of interns. Please accept this recognition as a token of our continued interest.

"It will be a pleasure at any time to have the opportunity to assist you in the good work which you are doing not only in the care of patients but also in the important work of instructing interns.

"Kindly bring this letter of recognition to the attention of the staff and any others who may be interested."

SAN JOAQUIN COUNTY

San Joaquin County Medical Society (reported by H. S. Chapman, secretary)—The San Joaquin Society met on March 1, President Dewey Powell presiding, and the following members present: Hull, Harbert, Thompson, McCoskey, Dameron, Sander-son, Powell, McLeish, Marlin, Conzelman, McNeil, Barnes, Dozier, Holliger, Margaret Smythe, Hudson Smythe, Kaplan and Chapman. Drs. Sippy and Van Meter were guests. The speakers of the evening were Harbert of Stockton and Hull of Stockton. Harbert had as his subject, tumors of the kidneys, with presentation of a case. He discussed the source of tumors, in and about the kidney, the differential diagnosis of tumors of male and female. He next presented a patient who had been operated upon for a very large cystic kidney following a laceration of the kidney with hemorrhage, subsequent to a fall. This kidney measured 4x6 and weighed four pounds, and four ounces.

Dr. Hull spoke on abdominal tumors. He presented two specimens and pictures of several others. Both papers brought out a great deal of discussion.

SONOMA COUNTY

Sonoma County Medical Society (reported by N. Juell, secretary)—The March meeting of the society was held at the office of Alfred A. Thurlow. George DeWitt Culver read a paper on Dermatology. The society appointed a committee on hospitals and post-convention clinics to co-operate with the central committee in San Francisco. This committee is made up of Jackson Temple of Santa Rosa, Alfred A. Thurlow of Santa Rosa, and Stuart Z. Peoples of Petaluma.

STANISLAUS COUNTY

Stanislaus County Medical Society (reported by R. E. Maxwell, secretary)—The Society met at Hotel Modesto March 16, at dinner, President McPheeters presiding. Those present were DeLappe, Reamer, Finney, Mottram, Hagedorn, Bemis, Walter Smith, and Maxwell. Walter Smith gave a report of a clinical case—vascular hypertension, and Reamer on luetic infection. Both reports brought out considerable discussion.

TULARE COUNTY

Tulare County Medical Society (reported by E. R. Zumwalt, secretary)—The society met on March 17 at Hotel Johnson, Visalia, with twelve members present. Officers for 1923 were elected as follows: President, A. W. Preston, Visalia; vice-president, C. A. Tillotson, Dinuba; secretary-treasurer, E. R. Zumwalt, Tulare; delegate to State meeting, Austin Miller, Porterville; alternate, R. N. Fuller, Tulare.

The speaker of the evening was Cavins D. Hart of San Francisco, who gave a paper on Treatment of the Toxemias of Pregnancy, which was followed by a general discussion.

The committee on certified dairies reported that the list of rules had been adopted and were in the hands of the printer. Also that B. F. Longan of Tulare was ready to begin the manufacture of certified milk about the first of April, his plant to have a capacity of 300 quarts per day.

WEEK-END AT DEL MONTE VIA AUTOMOBILE

Leaving San Francisco Saturday, June 30, 1923, at 10 a. m. Returning San Francisco Monday, July 2, 1923, about 6 p. m., in time for dinner, for parties of six.

All expenses of trip including machine, driver meals on route and meals and lodging at Hotel Del Monte.

Price per person, \$30.

"Del Monte is one of California's largest and best loved resorts. It consists of a vast estate of 18,000 acres, maintained exclusively for the pleasure of its guests. It is one place in America—and probably in the world—where you can do everything or nothing. Whatsoever you choose to do, be it golf, polo, tennis, horseback riding, motoring, swimming, fishing, hunting, sailing, dancing, idling or working, can be accomplished under unsurpassed conditions of ease, comfort and luxury.

"Situated on the historic Monterey peninsula, which projects in the Pacific Ocean with the old Bay of Monterey on one side and the sapphire Bay of Carmel on the other, Del Monte combines the scenic beauty and the benefits of seaside and mountain. Added to this is an unequalled seaside climate, which varies an average of only ten degrees between winter and summer.

"Del Monte is but 125 miles southerly from San Francisco. The trip by railroad, or auto over the perfect State concrete highway, requires only approximately four hours with inspiring and picturesque scenery on all sides."

Special features are being arranged for a post-convention golf tournament on the famous Del Monte Course for Sunday morning, July 1, and possibly a polo game in the afternoon.

Reservations for this trip must be made through the American Express Company, Market and Second Streets, San Francisco, as early as possible, preferably thirty days in advance.

YOSEMITE VALLEY WEEK-END TRIPS

Leaving San Francisco Saturday June 30, 1923 at 11 p. m. and returning San Francisco, Tuesday July 3, 1923, 10:05 p. m.

All expenses of trip, Pullman berths, meals, lodging, etc., included. Price \$59.00.

Special parties of six can make arrangements to make this trip by automobile at the same rate.

Yosemite's appeal is always universal. There is no more beautiful time for viewing the spectacular cliffs and other natural wonders which have made Yosemite Valley known around the world as the Valley Incomparable.

El Capitan, Half Dome, Cathedral Spires, Bridal Veil—all these and more are to be seen at their best.

"One day in the midst of these divine glories is worth living and toiling and starving for" wrote John Muir, the great naturalist, and every day his words are echoed by visitors from almost every State and from many foreign countries, who frequently extend into weeks the stay they originally planned to make.

Among others this trip visits the following famous main points of interest. Viewing Artist Point, Inspiration Point, Signal Peak, Wawona, Mariposa Grove of Big Trees (complete tour of Grove, including Wawona Tunnel Tree, American Legion's Unknown Hero Tree, Grizzly Giant, Three Graces, Solitary Bachelor, trees named for States, Generals and Posts, etc.), Chinquapin, Bridal Veil Meadows, Mono Meadows, Ostrander Rock, Glazier Point and Overhanging Rock, the commanding viewpoint of the High Sierra Country.

Reservations for this wonderful week-end opportunity must be made through the American Express Co., Market at Second, San Francisco, as early as possible, preferably 30 days in advance.

Nevada State Medical Association

HORACE J. BROWN, M.D., Secretary Nevada State Medical Association, Associate Editor for Nevada

Nevada Medical Bulletin, March 15, 1923—It is with pleasure that we are able to announce that the "Public Hospital" bill passed the legislature and has been signed by the Governor; also that the "Nurses' Registration" bill was dug up at the last minute, passed, signed, and is now a law. We congratulate the nurses on at last being able to get a law passed that will not only protect them, but the public as well. All graduate nurses and all nurses that have had twenty-eight months' training in a Nevada hospital, under the direction of a physician licensed in this State, are entitled to register without examination, provided they do so by July 1. Elko County will be the immediate benefactor under the new hospital law, but any county that desires such a hospital can present a petition, signed by 25 per cent of the taxpayers, to the commissioners, who will put the question on the ballot at the next general election and, if it carries, they will immediately proceed to provide such a hospital. It is a good law to know about, and we advise you to acquaint yourself with its provisions.

The A. M. A. meets at San Francisco, June 25-29, and the California Society is working hard to make it a success. They are anxious for as many of our members as possible to be present, and have sent out cards in order to find out just how many will attend. If you have received one of them, be sure to mail the "Return" card—and do your darndest to write "Yes" on the proper line. By the way, did you know that the California Journal is the official organ for the N. S. M. A.? It was so voted at the Elko meeting, and each one of our members is expected to subscribe for it. If you are not already a subscriber, send \$2 to Dr. W. E. Musgrave, 1016 Balboa building, San Francisco, and you will receive twelve issues of a real live medical journal.

The vote on the time for holding our annual meeting is so overwhelmingly for October that there is little doubt that it will be held at that time, and we hope to see not less than seventy-five of our members present. Take a peek at your 1923 card (just to be sure that you have it), then begin going to bed early each night so that you will be all caught up with your sleep. You may then be able to stand the strain of all the oratory, et cetera (especially et cetera). However, we do not guarantee that you will not have to knock off early the last night; it may be necessary in order to preserve your pristine beauty—and peace in the family.

The next annual meeting will be held on September 28, 29 and 30, at Reno, or thereabouts. These dates were selected because they are late enough to let everybody get over the summer rush and early enough to avoid the chill of Fall weather. If Bowers Mansion is available at the time, the meetings will probably be held there, and it is believed that the time and place will bring out an even larger attendance than we had last year. You will notice that the 30th falls on Sunday, and also that three days are set aside this year. The first two days will be devoted to the scientific program and business meetings, while the last day will be used strictly for entertainment. It is planned to spend the day at Pyramid Lake, where we will have a barbecue, fishing and swimming, and everybody is expected to be there with his wife. The Secretary would like to hear from all that will contribute a paper, or case report, and he would like to hear right away as it is time to be getting the program whipped into shape. The Chicago Lying-In Hospital and Dispensary writes: "A further study of hydatidiform mole has been undertaken at this hospital especially in regard to malig-

nancy following this condition. Case reports are wanted from outside physicians. Cases reported by physicians will be greatly appreciated and the physician will be given due credit in any literature published." Address communications to Dr. R. B. Kennedy, 426 E. 51st Street, Chicago. Governor Scrugham has recently filled vacancies in the Board of Medical Examiners, and that body is now composed of the following: S. L. Lee, Carson City; J. L. Robinson, Reno; A. C. Ohmstead, Wells; G. E. Leavitt, Yerington, and S. K. Morrison, Reno. An excellent board, we think, and every one a member of the N. S. M. A. This is as it should be, and no harm can come from having as members of the board men who are affiliated with the body that uses its efforts to uplift the qualifications of the members of the medical profession. There are three or four fellows in this state that are so all-fired busy that they haven't time to answer a letter even when an addressed, stamped envelope is sent them. We don't know what to do with them, but we know what we would like to do. We'd like to walk into their offices, put our feet up on their desks and not take them down until they paid their dues and promised faithfully not to get in arrears again. We know we could collect from every one of them if we could only see them in person but as that is impossible we think they should take pity on us and mail us a check. Going to write a paper this time. (Nevada Medical Bulletin, April 15, 1923.)

Who Shall Practice Preventive Medicine—The medical profession is interested in all types of medicine, whether preventive or curative. As a matter of fact, there really is no hard and fast line of demarcation between preventive and curative procedures, any more than there is a dividing line between the metals and the non-metals. The medical profession is interested in all problems of public welfare, but when it comes to matters concerning public health they are the only ones who, through tradition and training, are capable of handling the problems which present themselves for solution. It is the only profession at the present time that is engaged in real preventive medicine, and it is the profession of election for this type of work. Usually public health movements have been initiated by the medical profession, but in many instances the work has passed into the hands of the laity because the members of the medical profession have been preoccupied with other important problems.

It has been claimed by some of the unthinking individuals among the laity that preventive and curative medicine are diametrically opposed. They do not realize that there is, in the last analysis, but little difference between preventive and curative measures. For example, all physicians take blood pressures and make urine analyses during the course of a pregnancy, and not by the wildest stretch of the imagination can this be interpreted as a curative measure; it is a preventive measure, pure and simple.

Through various educational movements which are now being conducted to instruct the public with regard to conditions which are definitely preventable, the great mass of the people are gradually coming to realize that the physician must be looked upon as a teacher and advisor, rather than one who is to be consulted only when symptoms of a diseased condition have manifested themselves. The physician, too, realizes that this teaching attitude is appreciated by the public, for by this means he is able to prevent premature deaths among his clientele. Not only does he spare the patient in question for future usefulness, but, more important, he does not divorce the rest of the members of that particular family. The physician realizes that the most appreciative patient is one who, through early advice and proper instruction, has been saved from untold suffering and an untimely death.—J. E. Rush, The Medical Practitioner and the American Society for the Control of Cancer, The Journal-Lancet, March 15, 1923.

Pharmacology and Therapeutics

COUNCIL ON PHARMACY AND CHEMISTRY OF THE A. M. A.

(Reported by W. A. Puckner, Secretary)

The March report of the Council on Pharmacy and Chemistry lists a number of new remedies which have been accepted by the Council for inclusion in New and Non-Official Remedies: Abbott Laboratories, Sulpharsphenamine-Abbott; Borchardt Malt Extract Co., Borchardt's Cod Liver Oil and Iron Iodide; E. R. Squibb & Sons, Sulpharsphenamine-Squibb; Non-proprietary Article; Sulpharsphenamine.

NEW AND NON-OFFICIAL REMEDIES

Mercurosal—Disodiumhydroxymercurisalicyloxyacetate. Mercurosal contains from 43.0 to 43.8 per cent of mercury in organic combination. It is claimed that mercurosal is relatively free from irritant action, that it is eliminated without untoward effects on the kidney, and that the toxicity is relatively lower than mercuric chloride or mercuric salicylate. Mercurosal is intended for the mercurial treatment of syphilis. It is administered either intramuscularly or intravenously. Mercurosal is marketed in two forms: Mercurosal Intravenous, tubes containing mercurosal 0.1 Gm., and mercurosal intramuscular, tubes containing 0.05 gm. Parke, Davis & Co., Detroit, Mich. (Journal A. M. A., March 24, 1923, p. 844.)

Pneumococcus Anti-Body Solution, Types 1, 11 and 111 Combined—An aqueous solution of the specific pneumococcus anti-bodies, Types 1, 11 and 111 in equal proportions, approximately free from the proteins of horse serum. There is some evidence that this anti-body solution is of value in the treatment of lobar pneumonia.

Pneumococcus Anti-Body Solution, Types 1, 11 and 111 Combined—N. N. R., marketed in packages of one 50 Cc. double-ended vials with a complete intravenous outfit, and in packages of one 50 Cc. double-ended vials. H. K. Mulford Co., Philadelphia. (Journal A. M. A., March 24, 1923, p. 844.)

Sulpharsphenamine—The salt, disodiumdiaminodihydroxyarsenobenzenedimethylenesulphonate, adjusted by the addition of inorganic salt to an arsenic content of from eighteen to twenty per cent. The arsenic content of three parts of sulpharsphenamine is approximately equal to two parts of arsphenamine. The actions and uses of sulpharsphenamine are the same as those of neoarsphenamine, over which it is claimed to have the advantage of greater stability of solution in the presence of air and of permitting subcutaneous injection. For subcutaneous or intramuscular use the drug is dissolved in sterile, freshly distilled water in the proportion of about 0.1 Gm. to 0.3 Gm., for intravenous use a greater dilution is desirable. (Journal A. M. A., March 31, 1923, p. 919.)

Sulpharsphenamine (Abbott)—A brand of sulpharsphenamine—N. N. R. It is marketed in ampules containing respectively, 0.2 Gm., 0.3 Gm., 0.4 Gm., and 0.6 Gm. The Abbott Laboratories, Chicago. (Journal A. M. A., March 31, 1923, p. 919.)

PROPAGANDA FOR REFORM

More Mis-Branded Nostrums—The following products have been the subject of prosecution by the federal authorities charged with the enforcement of the Food and Drugs Act: Vita Oil (Vita Oil Co.), consisting essentially of non-volatile vegetable oil, mineral oil and volatile oils, including turpentine, clove and cinnamon oils with extractives of red pepper and pepper. Gold Medal Brand Sexual Pills (S. Pfeiffer Mfg. Co.), containing phosphorus and extract of damiana and nux vomica. Lovett's Pills (Dr. Lovett Medicine Co.) containing iron, sodium and calcium carbonates and sulphates with traces of plant extractives. Savanol (G. P. Steyh),

capsules containing a saponifiable oil with traces of savin oil, apiol and aloin. Locock's Cough Elixir (I. L. Lyons & Co.), consisting essentially of extract of plant drugs, including ippeac and squill, small amounts of morphin, and acetic acid, sugar and water. Sex-Co. Restorative Tablets (Clyde Collins Co.), containing strychnin, extract of damiana, iron and phosphorous compound. Compound, Compound Tansy, Pennyroyal and Cotton-root Pills (Allan-Pfeiffer Chemical Co.), consisting essentially of iron sulphate, aloes and oil of pennyroyal. (Journal A. M. A., March 3, 1923, p. 645.)

Pan-Secretin Compound—Harrower's Pan-Secretin Compound, according to the advertising circular is "an endocrine combination embodying: (1) a specially prepared extract of Islets of Langerhans (pancreas tail), rich in its incretory glycolytic product; (2) an acid extract of the duodenal mucosa containing the pancreatic activator secretion, and (3) a small dose of desiccated calves tonsil. This formula emphasizes the fact that some of the commercial houses are carrying us back to the days of the shotgun nostrum. It would seem hardly necessary to say that such a combination as Pansecretin Compound is unscientific, and there appears to be no scientific evidence to warrant the belief that such a combination is of value. Four years ago the Council on Pharmacy and Chemistry published a report on some of the Harrower "pluriglandular" mixtures and gave reasons why such unscientific combinations were not acceptable for New and Non-Official Remedies. (Journal A. M. A., March 10, 1923, p. 717.)

Peralga, A New German Synthetic—For the past few years American physicians have been relatively free from the propaganda of the foreign synthetic drugs—real or alleged. Recently, however, there have been signs of revival of this type of product. One of the products being endowed with the halo of creative chemistry, is Peralga (Schering and Glatz), known in Europe as Veramon. The product is claimed to have been originated in the pharmacologic laboratory of Professor Starkenstein, University of Prague (who has lent his name to a number of statements valuable to the proprietary interests.) Peralga is claimed to be a definite chemical compound, made by heating a mixture of barbital and amidopyrin, and it is claimed that this compound is absorbed without being split up into its component radicles. The A. M. A. Chemical Laboratory investigated Peralga. The examination developed that Peralga is not a definite chemical compound as claimed, but essentially a mixture of barbital and amidopyrin, containing an impurity produced in the fusion of the mixture. To determine if Peralga will produce any effects different from a mechanical mixture of barbital and amidopyrin in the same proportion, a specimen of Peralga and a mixture of barbital and amidopyrin in the same proportions as in Peralga were sent to the Pharmacologic Laboratory of Cornell University Medical College for comparative tests. The summary of the laboratory report was: "We can see no difference in the behaviour of cats towards similar doses of the two preparations; the mechanical mixture made in the A. M. A. Chemical Laboratory and the preparation of Schering and Glatz—and they show very little difference between similar doses of barbital and those contained in Peralga. . . . Of course there is no chance of making observations on cats that would show analgesic actions in headache. But since the observable effects on cats are so nearly identical, it is only fair to presume that the 'synthetic' and the mixture are practically alike in action." (Journal A. M. A., March 31, 1923, p. 942.)

Prescribing Codein—Codein is a derivative of opium and hence prescriptions for it come within the purview of the Harrison Narcotic Act, no matter what the individual physician may believe in respect to its habit forming properties. (Journal A. M. A., March 31, 1923, p. 945.)

Biologic Reactions of Arsphenamin—The com-

plexity of the physical and chemical properties of arsphenamin probably accounts for the complexity of its biologic reaction resulting for the passage through the body. Among the most disturbing of these reactions are the nitritoid or anaphylactoid symptoms occurring after intravenous injection. The earlier studies of the anaphylactoid reactions from arsphenamin cleared up certain features, but left the underlying causes untouched. The investigations of Jean Oliver and his collaborators lead to the conception that arsphenamine can exist in the colloidal state temporarily at least, and that the temporariness of this state is essential to anaphylactoid reactions. The investigators find that arsphenamin has a fairly constant agglutinating titer for blood corpuscles. The presence of electrolyte is essential for agglutination. The work suggests that agglutination by arsphenamin occurs during the transition stage from its colloidal into the crystalliodal state in the circulation, and that stabilization in the colloidal state prevents the agglutination. From their work they conclude that there are two phases to the reactions from arsphenamin: (1) the early or physical phase, which is concerned with the physical properties of the agent and results in the corpuscular agglutination with multiple embolism, the outcome being fatal sometimes, and (2) the later or chemical phase that results in parenchymatous degeneration of viscera (kidney and liver), this being due to the action of the arsenic ions in the usual way. (*Journal A. M. A.*, March 31, 1923, p. 920.)

Eugenical Sterilization—The history of legislation in the United States on this subject, according to the report of the Psychological Laboratory of the Municipal Court of Chicago, may be summarized as follows: From March 30, 1905, to January 1, 1922, fifteen States passed laws providing for sterilization under specified conditions. On January 1, 1922, the law last in force in Indiana, Nevada, New Jersey, Michigan, and Oregon had been declared unconstitutional; the last laws passed in California, Connecticut, Iowa, North Dakota, South Dakota, Nebraska, Kansas, and Wisconsin had not been tested in the courts. The New York law of 1912 was repealed in 1920, after two lower courts had declared it unconstitutional, and while a further appeal was pending. Of the decisions declaring laws unconstitutional in the first five States mentioned, one was rendered in 1913, two in 1918, and two in 1921.

Under the laws which have been or are now operative, 3233 people had undergone operations up to January 1, 1921; of these operations, 2558 had taken place in California and were, in the bulk of the cases, performed on patients in hospitals for the insane and under a law, the constitutionality of which had not been tested, though a previous sterilization law had been held constitutional in California.—*The Survey*, March 15, 1923.

Nu Sigma Nu—"The Spirit of California" will be the theme of the annual convention dinner of Nu Sigma Nu this year. The revels will be held in the Jinks Room of the Bohemian Club on Thursday evening, June 28, at the hour of seven. The costumes, pastimes, and amusements of the '49 days will be clearly in evidence, and under the able leadership of Dr. "Jack" Shields (J. Wilson Shields) the western men will show their eastern brethren a full measure of hospitality and pleasure.

Preliminary announcements have been mailed to every member in California and a large number of reservations have been made. If you have not already done so, will you not attend to this matter at once for the management must have an accurate gauge of the local support. Seating arrangements can be made in advance and certainly no more congenial atmosphere will be obtainable than that which will prevail on this gala night.

Address all communications to H. D. Crall, 1242 A Second Avenue, San Francisco, California.

MEDICAL ECONOMICS

Why not let our advertisers help you?

Alum Rock Sanatorium—Philip King Brown, George H. Evans and Louis Boonshaft announce elsewhere in this issue of the *Journal* the opening of the new Alum Rock Sanatorium, for the treatment of tuberculosis in all of its forms.

It is pleasing to announce the establishment of institutions under competent management for the treatment of tuberculosis; there are too many so-called tuberculosis sanitariums not adequately provided with facilities for the treatment of the sick and not personneled by educated, scientific physicians. The *Journal* is glad to include in its advertising columns the name of this new sanatorium with those other splendid institutions of similar character which we have been carrying for sometime, namely California Sanatorium, Belmont; Canyon Sanitarium, Redwood City; Colfax Hospital for the Tuberculous and Colfax School for the Tuberculous, at Colfax; Dr. King's Sanatorium, Banning; Oaks Sanitarium, Los Gatos; Pottenger Sanitarium, Monrovia.

New Metabolic Institute—Elsewhere in this copy of the *Journal* the establishment of a new institute for the treatment of diabetes, nephritis and nutritional diseases, is announced. The Metabolic Institute is under the control of Albert H. Rowe and Caroline Cook Ciffin.

As was to be expected, the public is already being exploited as a result of the recent discoveries in connection with the treatment of diabetes in particular. It is pleasing, therefore, to be able to announce an institution of this character controlled by educated ethical physicians. The *Journal* also carries in its advertising columns the announcement of a department of this kind at the Santa Barbara Cottage Hospital, Santa Barbara.

Examination for License to Practice Medicine in California—Elsewhere in the *Journal*, the Board of Medical Examiners of California announces that there will be a meeting of the board in Los Angeles, June 18-21, inclusive, for the purpose of considering applications and holding examinations for license to practice in California. All persons interested in any kind of licensure or any other matter to come before the board should communicate with Charles B. Pinkham, secretary-treasurer, Flood Building, San Francisco.

Institutional Laundry Facilities—One of the important problems of hospital organization and management is that of the laundry. Many of the older hospitals did not make provisions for modern laundry facilities. Unfortunately, some of the newer hospitals now built or in contemplation seem to consider that this important service may be overlooked.

There are at least two splendid laundry machinery manufacturing concerns and service corporations in this country, and both of these carry advertising space in the *California State Journal of Medicine*—the Troy Laundry Machinery Company has appeared in our columns for sometime, and we are pleased to call attention to the new advertisement of the American Laundry Machinery Company beginning with this issue.

New Surgical Supply House for San Francisco—Bischoff's Surgical House of Oakland, whose advertisement has appeared in our advertising columns for sometime, announce the opening of Store No. 2, at 422 Sutter Street, San Francisco.

Reid Bros.' New Catalogue—Reid Bros., manufacturers and wholesalers of hospital supplies of San Francisco, have just issued a very attractive and useful catalogue. This catalogue is a credit to any business house and will be found valuable and useful to hospitals everywhere.

BOOK REVIEWS

Diseases of the Skin. By Henry H. Hazen, M.D. 2nd ed. St. Louis: C. V. Mosby Company. 1922.

Dr. Hazen's second edition of *Diseases of the Skin* is a book of convenient size, good print, and clearly expressive of the author's idea of a text-book. The illustrations are excellent, but the book is too incomplete in essentials. For instance, the woeful neglect of radium therapy, with the claim of the superiority of roentgen rays, is the author's personal opinion, but it may fail to supply the reader's wants. His dismissal of some of the generally accepted therapeutic measures is not what one would expect in a text-book. The descriptions of diseases are good. A clinching point in the diagnosis of scabies in women—that of the itching and eruption about the nipples—is missed. Stress is laid upon its presence in the folds beneath the mammae instead.

In favor of the book, the reviewer can frankly state that he felt repaid for the time spent in reading it, and no doubt another would be of the same opinion. The fact that much of the personal side of the writer enters into the treatise adds to its value.

G. D. C.

Practical Dietetics in Health and Disease. By Sanford Blum, M.D. Philadelphia: F. A. Davis Company. 1922.

This book on diets by Sanford Blum will be welcomed by many physicians who have felt the need of a ready reference work on diets in health and disease. It is a plain, common sense statement of the essential factors governing the prescription of diets, and the pages can be read to the patient or transcribed for him with the certainty that they will be understood and easily followed.

The freedom of the book from the quantitative attitude toward diet, which has become so familiar during the last decade, is delightful and refreshing; the patient who loves to weigh his bread-crusts, and the physician who wishes to think in terms of calories per kilo of body weight, will get small satisfaction out of this book. It has been written by a clinician for practicing physicians who want to be sure of their ground when directing diets, but who do not wish to burden their minds with formulae and equations of a pseudo-scientific type and a purely factitious character.

A very complex index of diseases and their dietetic treatment and an index of foods giving their indications and contra-indications, adds greatly to the value of the books to the busy man who will appreciate being able to turn to the information required without loss of time.

L. S. M.

Abdominal Pain. By Prof. Dr. Norbert Ortner. Authorized translation by Wm. A. Brams & Alfred P. Luger. N. Y. Rebman Company. 1922.

Review of "Abdominal Pain," by Ortner

This book is a clinical treatise discussing the diagnostics of abdominal conditions in a way similar to that in which the problems are presented to the physician. The symptom of pain is taken as the starting point and the diagnosis worked out primarily from the nature, location, and history of this pain. In doing this the author has described an amazing number of abdominal conditions that may arise, both common ones and rare ones. The translation, while doubtless accurate, is somewhat lacking in ease, and the book in consequence is in places rather laborious reading. In spite of this defect, however, it is a valuable and important work, and it is one that is well worthy of a place

in the library of every surgeon and physician. The experience of the author has been large, his observations careful, and his reasoning clear. Time nor future discovery will ever make it possible to neglect the method of studying disease which is presented here and which is as old as the practice of medicine—viz., the study of the symptoms which the patient presents by means of the unaided senses.

R. V. L.

BOOKS RECEIVED

The Heart in Modern Practice Diagnosis and Treatment. By William Duncan Reid, M.D., Chief of Heart Clinic at the Boston Dispensary, Junior Assisting Visiting Physician and Member of the Heart Service at the Boston City Hospital. 32 illustrations. Philadelphia and London: J. B. Lippincott Company.

Inflammation in Bones and Joints. By Leonard W. Ely, M.D., Associate Professor of Surgery, Stanford University. 144 illustrations. Philadelphia and London: J. B. Lippincott Company.

The Riddle of the Rhine, Chemical Strategy in Peace and War. By Victor Lefebvre, Officer of the Order of the British Empire (Mil.), Chevalier de la Legion d'Honneur, Officer of the Crown of Italy, Fellow of the Chemical Society, etc. With a preface by Marshal Foch and an introduction by Field Marshal Sir Henry Wilson, Bart., Chief of the Imperial General Staff. New York: E. P. Dutton & Company, 681 Fifth Avenue.

Addresses and Papers, Dedication Ceremonies and Medical Conference, Peking Union Medical College, September 15-22, 1921. Peking, China. 1922.

Rest and Other Things. A little book of Plain Talks on Tuberculosis Problems. By Allen K. Krause, M.D., Associate Professor of Medicine, Johns Hopkins University, Baltimore. Williams & Wilkins Company. 1923.

The Patient's Viewpoint. By Pamel J. Flagg, M.D., Author of "The Art of Anaesthesia." The Bruce Publishing Company, Milwaukee, Wisconsin.

The Psychology of Power. By J. A. Hadfield, M.A. (Oxon.), M.B. (Edin.) Ashhurst Neurological War Hospital, Oxford. New York: The Macmillan Company. 1923.

The Form and Functions of the Central Nervous System. An Introduction to the Study of Nervous Diseases, by Frederick Tilney, M.D., Professor of Neurology, Columbia University and Henry Alsop Riley, M.D., Associate in Neurology, Columbia University. Second Edition. 591 figures containing 763 illustrations of which 56 are colored. New York: Paul B. Hoeber. 1923.

"Through the babel of popular prattle on Coue, intelligence tests, psycho-analysis, and cults of business or marital success, we are beginning gradually to realize that there is field for scientific investigation in mental as well as physical health, and that it is as right, necessary and justifiable to cultivate the one as the other. But how? Should we hold, with one school, that our troubles exist only in our minds, and to be banished need only to be ignored? Or shrink with horror, in accordance with the tenets of another group, at the dungeon of complexes that such a method would create?"—The Survey, March 15, 1923.

NEW MEMBERS

Alameda County—Joseph B. Enos, Cleve E. Kindall, Oakland.

Butte County—Willard B. Johnson, C. L. Brown, Chico.

Fresno County—E. D. O'Neill, E. R. Scarborough, Fresno.

Humboldt County—F. R. Horel, Arcata.

Imperial County—John McDonald, Brawley.

Kern County—E. A. Schaper, Keene; Charles Hawkins, Taft.

Lassen-Plumas County—H. B. Ehle, Susanville; Robert J. Dixon, Westwood.

Los Angeles County—A. F. Ryan, G. R. Servin, A. C. Willmott, Los Angeles; William H. Wimp, Pasadena; Hovey L. Shepherd, Elmer H. Johnson, Wilfred W. Bennett, Edward P. Clark, Los Angeles; Roscoe H. Brown, Long Beach; Jay J. Crane, C. O. Driver, Robert E. Grogan, J. J. Kirchoff, Le Val Lund, Shaen Magan, Los Angeles; Marion M. Null, Eagle Rock; M. T. Steele, Los Angeles; Riley Russell, Glendale; E. R. Lambertson, Los Angeles; Charles W. Stewart, Whittier.

Marin County—B. H. Pratt, Larkspur; G. M. Landrock, Mill Valley.

Mendocino County—Robert O. Le Baron, Donald Smith, Talmage.

Monterey County—Hugh F. Dermody, William M. Gratiot, Pacific Grove.

Orange County—B. W. Hardy, Huntington Beach; Roy M. Fortier, Santa Ana; John C. Hethcock, Fullerton.

Placer County—Claude C. Tucker, Georgetown.

Riverside County—Silas J. Brimhall, Elsinore.

Sacramento County—Bernard J. Rea, Sacramento.

San Bernardino County—Ralph L. Alexander, Ontario; William C. Clough, Llewellyn C. Kellogg, Loma Linda; Walter W. Fenton, Arrowhead; James R. Liverman, Needles; Fred B. Moor, Loma Linda.

San Diego County—L. R. Knorr, Lakeside; George E. Cruikshank, D. A. Seibert, W. H. Geistweit, San Diego.

San Francisco County—Paul D. Michelson, Jr., Charles E. Nixon, William A. Dougherty, Howard M. Engle, Louise E. Taber, Henry Ostroff, Robert A. Ostroff, Arthur W. Herbert, Harry G. Ford, Christopher Leggo, Martin D. Icove, San Francisco; Harvey H. Whitney, Burlingame; John M. Waste, McCammon, Idaho.

San Joaquin County—A. L. Van Meter, Stockton; C. V. Thompson, Lodi; H. E. Kaplan, Stockton.

Santa Barbara County—Gilbert V. Hamilton, Santa Barbara.

Santa Cruz County—W. R. Congdon, Santa Cruz; A. F. Davis, Soquel.

Shasta County—J. E. Taylor, Redding.

Tulare County—Norman C. Paine, Exeter; H. R. D. Shoemaker, Lindsay; J. Harvey Banks, Visalia; Morton W. Fraser, Woodlake.

Obituary

PAUL WEGEFORTH, M. D.

Born May, 1887—Died March, 1923

Dr. Wegeforth was graduated from Baltimore City College with honors. In 1908 he received the degree of Bachelor of Arts from Johns Hopkins

University, and the degree of Doctor of Medicine from the same University in 1912. From 1909 to 1911 he was an exchange student at the Universities of Berlin, Strassburg, and Leipzig. Following graduation he was resident physician at the Church Home and Infirmary at Baltimore, following which he served as assistant to Dr. Harvey Cushing for one and one-half years at the Peter Bent Brigham Hospital.

One of the first volunteers at the outbreak of the war he was sent to Camp Meade at Baltimore, but was soon transferred to the Johns Hopkins Medical School, where he and Dr. Louis Weed were placed in charge of the Army Neuro-Surgical Laboratory, with seventeen assistants. Much valuable work was done and it received honorable mention, eight reprints being published by the Rockefeller Institute in the "Monographs of the Rockefeller Institute of Medical Research," under the names of Dr. Louis Weed, Dr. Paul Wegeforth, Dr. J. B. Ayer, Dr. C. R. Essick.

During his period of military service he was sent to Camp Jackson, Virginia, to investigate an epidemic of meningitis, and while there discovered that meningitis developed within twenty-four to forty-eight hours after a lumber puncture was made on a case suffering with an acute infectious disease. This was considered a very important discovery. He remained at Camp Jackson during the influenza epidemic, putting in long hours working among the men. At another Virginia camp he investigated the sleeping sickness, after which he returned to Johns Hopkins, where he remained until the armistice was declared. After the armistice he was sent to Letterman General Hospital in San Francisco for six months, and was discharged there.

Returning to San Diego he resumed his practice, but was forced to give it up on account of his health about a year ago. Dr. Wegeforth was a member of The American Medical Society, The Alumni Association of Johns Hopkins Medical School, the San Diego County Medical Society, and many other organizations.—(San Diego County Medical Bulletin, April 6.)

DEATHS

Cox H. M. Died at San Luis Obispo, March 4, 1923, age 74. Graduate of the College of Physicians and Surgeons of Keokuk, Iowa. Licensed in California in 1895. Up to the time of his retirement in 1920, Dr. Cox was a member of the San Luis Obispo County Medical Society, the State Medical Society and the American Medical Association.

Hon. Ulrich. Died at Los Angeles, March 15, 1923, age 71. Graduate of the University of Louisville Medical Department, 1875. Licensed in California in 1903. He was a member of the American Medical Association.

Kosby, Augustus E. Died at Yuba City, March 21, 1923, age 77. Graduate of the University of California Medical School, San Francisco, 1875. He was a member of the American Medical Association.

Lydston, C. Frank. Died at Los Angeles, March 14, 1923, age 65. Graduate of the Bellevue Hospital Medical College, New York City, 1879. He was a Fellow of the American Medical Association.

White, Mary B. Died at Palo Alto, March 17, 1923, age 66. Graduate of Hahnemann Medical College and Hospital of Chicago. She was a member of the American Medical Association.



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California State Journal of Medicine

OWNED AND PUBLISHED MONTHLY BY THE MEDICAL SOCIETY OF THE STATE OF CALIFORNIA

BALBOA BUILDING, SECOND AND MARKET STREETS, SAN FRANCISCO

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VOL. XXI

JUNE, 1923

No. 6

ORIGINAL ARTICLES

RESPONSIBILITY FOR STATEMENTS AND CONCLUSIONS IN ORIGINAL ARTICLES

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CERTAIN FACTORS TO BE CONSIDERED IN JUDGING THE EFFECTS OF PRO- HIBITION IN RELATION TO THE USE OF NARCOTICS

By LESTER D. VOLK, M. D.,
Member of Congress from New York

The history and record of the development of the present narcotic situation, if it were more widely known and appreciated and the scientific literature on the subject of narcotic addiction more widely known and recognized, would make any query as to alcohol prohibition laws having any effect upon the use of narcotic drugs unnecessary.

In my ten years of experience and contact with this subject in the capacities of State legislator, doctor, medical journal editor, and Congressman, I cannot recall of any reputable authority on this subject of narcotics and addiction making a statement to the effect that prohibition would or had increased or influenced the spread or consumption of narcotic drugs.

Indeed, every report or survey entitled to scientific credence and the foremost scientific authorities on this subject, either man of personal experience in clinical work or of study into its history and literature, have, I believe, emphatically declared that the coming of the prohibition amendment has had absolutely nothing to do with the

development of the present narcotic drug situation and conditions.

Moreover, the actual elements and factors in the causation of existing narcotic conditions are so completely a matter of record and so incontrovertibly to be traced in that record, that it is absurd to look outside of the narcotic drug history and record of the past ten years to find the incontrovertible machinery of development of the present situation.

To one at all conversant with the history of the past twelve years, with its various promotions and experiments and publicity and propaganda in this matter of narcotics, the absurdity of the claim that prohibition has had any effect in the causation of existing narcotic conditions is apparent in the fact that *the present narcotic conditions have been developed by the same factors years before there was either a national prohibition, or serious talk of it.*

The first development and spread of smuggling and peddling came in New York State following sensational publicity and the enactment of the Boylan law in 1914.

It is more than a coincidence that the sort of advertising and sensational publicity which has always preceded this type of legislation, has also always been followed by the development of underworld commerce and spread of addiction of non-therapeutic origin among the youthful and curious.

The events of 1914, on a smaller scale in the State of New York, exactly follow the history of identical forces exerted since 1919, which is the period in which the present situation was developed.

The record of this is so voluminous that it is not necessary to do more than state the fact in this place and call attention to the fact that there was at that time no prohibition of alcohol, so that the crisis and beginning of smuggling and peddling and spread of addiction among the youthful could not have been attributed to the Eighteenth Amendment, which was not to exist for another six years.

In what is undoubtedly the most scientific and accurate analysis in the form of official report coming from a standing committee of any scientific organization, the report of the Narcotic Committee in the American Public Health Association, rendered October, 1919, is stated:

"We would emphasize the fact that cocaine, alcohol, and other drugs of indulgence do not fall into this definition (of opiate addiction) and they and their problems of handling, treatment, and

control are entirely different and distinct from the matter of opiate addiction-disease."

(This report appeared in the American Journal of Public Health, January, 1920.)

Dr. Charles E. Terry, executive of the Bureau on Narcotic Drug Research of New York, stated before the hearings on the recent Porter resolution:

"I do not think there is any connection between prohibition and addiction."

In American Medicine, special narcotic number, December, 1917, is contained a preliminary report by the Whitney New York State Joint Legislative Committee, which carried on for two years the only open and exhaustive investigation yet made on the subject of narcotics, and a remarkably clear analysis by a Federal Government official of the situation and its causes and development since the passage of anti-narcotic legislation in 1914.

No mention is made in either of these most reliable and authoritative statements as to any increase of use of narcotic drugs caused by prohibition of alcohol.

The final report of the Whitney committee, in 1918, confirmed the findings of its preliminary report.

In the New York Herald, November 22, 1920, is stated as follows:

"Dr. Ernest S. Bishop, the well-known diagnostician whose experience with alcoholics and drug addicts has made him an authority on the subject, says that there are more drug addicts today than ever before; and that there is more illicit drug traffic than ever before.

"However," says Dr. Bishop, "*this increase is not because of the enactment of the Eighteenth Amendment.* Prohibition has nothing whatever to do with it."

As Dr. Bishop is recognized as the best authority on the subjects today, this statement alone must be regarded as practically ex cathedra announcement.

I might go on and quote at great length from other authorities and reports to the same effect. It would be, however, redundant repetition of what is regarded among all qualified and informed persons as axiomatic fact.

There is no basis for the statement that the indulger in alcohol would turn to the administration of opiates in the expectation of substitution effect or replacement of stimulation.

It is also doubtful if there has been any real alcohol prohibition in effect, so that the necessity for any such hypothetical substitution has been absent. It is said to be far easier and much less expensive to obtain alcoholic liquor than it is to obtain narcotic drugs.

It is not enough to deny a proposition without furnishing evidence as to some of the facts concerned in the history and machinery of actual causation in the drug situation which it must be admitted has come to exist.

In an editorial in the Medical Economist of June, 1918, concerning the newly enacted Whitney law and commission in New York State, I predicted:

"This law will prove a wise and efficient ad-

vance in the solution of the narcotic situation, *if it is wisely and efficiently administered.* If it is not so administered, there are the gravest possibilities of a repetition of the 'reign of terror,' which followed upon and was the result of the ignorant and incompetent interpretation and administration of the first New York Narcotic law, the original Boylan law."

Concerning the fulfillment of my editorial prophecy, Judge Cornelius F. Collins, chairman of the Narcotic Committee of the Judges of New York State since 1914, stated in a speech before the National Police conference, and appearing in the National Police Bulletin of August 23, 1921:

"We established a State Commission. It started to make regulations. The Board of Health persuaded them to make regulations and they placed restrictions around the doctors that made them stop practicing. My theory was followed out again that, as soon as the doctors were stopped practicing medicine in this connection and stopped treating the addicts, then would come the underworld peddlers and all the underworld terrors that we feared."

This, Judge Collins points out, in a letter to the Medical Record, October, 1921, "is not due to failure of the statute, but to the enforcement of promulgated rules and regulations which were in some instances in their effect, tantamount to repeal of the law and contrary to its intents and purposes."

The same explanation with elaborating speeches is contained in my own Congressional House Resolution No. 258, which has been endorsed at their last annual conventions by the American Medical Association, and the other important national scientific bodies, and must, therefore, be regarded as the official expression of medical and scientific opinion upon this subject. (See Congressional Record, January 12, 1922, and July 18, 1922.)

A most significant warning and prediction of the present situation was presented to the Legislature of New York State, and came from the judges of New York State in the form of a telegram of protest against what was known as the Cotillo bill, which in 1920 attempted the re-enactment of the provision of the old Boylan law under which smuggling and peddling and spread of addiction had its first serious impetus.

The telegram of warning and protest I quote from as follows:

"The bill referred to would utterly destroy the constructive work of five years, including two years intensive study by Joint Legislative Committee.

"Forbidding doctors to prescribe would threaten public calamity.

"The underworld and illicit traffic would find a new and appealing impetus, and violations of the law both as to narcotics and crimes vastly increased."

This prediction and warning came from the Judges' Association of New York State in March, 1920.

It has been most obviously and calamitously fulfilled.

As I said before, its fulfillment is discussed at length in my congressional speeches and resolutions above referred to, and by endorsement of the scientific bodies now made practically the consensus of opinion of the scientific profession.

These above quoted and other expressions of warning and expositions of fulfillment are reinforced by recent declarations coming from the Assistant Attorney-General of the United States, John W. H. Crim, from whom I quote his official utterances before the Committee on the Judiciary, January 23, 1923, and the Committee on Foreign Affairs, February 14, 1923. Speaking of narcotics and addiction, he says in part:

"It is a problem for which we have no foundation in penology today.

"It is today very largely a pathological matter.

"The law has been directed at preventing physicians from selling narcotics, and by the same token has forced the addict into a criminal atmosphere to get them.

"All of which has stimulated the trade and occupation of the smuggler.

"The war is very much responsible for the stimulation of the narcotic traffic.

"Many of these boys were over there in the trenches. They received narcotics in their treatment. They came back here as addicts. Among those who had been discharged from the army, there are a great many.

"I had a gentleman come in here yesterday, and his brother is an addict. It started in an army hospital.

"This young man is searching around trying to find somebody who can tell him what to do, whether there is any hope or not.

"We are in the dark until the medical profession tells us what is to be done.

"I am absolutely at sea for the reason that fundamentally it is a pathological matter, and until the medical profession and the scientists tell us what to do in handling these people, we are not going to make much progress.

"I feel that the present law regulates and reaches the better class of physicians. If anything, it has caused the more competent physicians to take the position that they would not administer narcotics, and has driven the addict ultimately, into crime itself.

"That occurs too frequently under the present law (or rather the present rules and regulations and interpretation of the law). That addict is gradually driven to the underworld, where you have not only the crime of buying and selling narcotics, but every other sort of crime, and there he buys his drug. In a little while he has no legitimate source of income whereby he can procure the drug at the prices—exorbitant prices—he is required to pay in the underworld. Then he goes to stealing, robbing, burglary, or some other means to get funds to get this drug, or he buys a bottle of it and sells out a part of it so that he may get his drug in that way, and you drive that fellow right into prison.

"You ask me what to do. I tell you frankly, I do not know. *It is a problem that the lawyer*

cannot answer until he has more reliable information from the medical profession.

"I want more investigation by the scientists on the drug addict. Now, as to what can be done with him and what ought to be done with him.

"We have the depraved man and the degenerate, and it would be just as well to exterminate them, but if these people can be cured, if these people can be prevented from becoming criminals, if they are merely sick people (as a very large number of scientists believe) the way to treat a sick man is not by criminal law, and we take that addict, put him in prison, keep him there during his sentence, let him out, and too frequently he is back again in a short time; and oftentimes, when he first went to his physician, he was a man of high ideals and high character."

Assistant Attorney-General Crim has tersely and accurately restated the contentions of the medical profession (except for a small group), as shown in many places and in my own speeches and resolutions, now endorsed by the medical men and organizations of this country.

In conclusion, Mr. Grim says:

"I do not want to be dogmatic. I do not want you to feel, Mr. Congressman, that I am certain. I think the data we have been working on, the literature we have been working on, is data that may be found later to be the wrong theory."

The concluding statement of Mr. Crim as to the error of the data upon which the law has been interpreted and administered for the past three or four years is the crux of the narcotic drug situation today.

For adopting false data and ignoring scientific literature and experience and records and facts, the administrators of the law in the past four years are not, however, to be entirely blamed.

They have been misled as has a large part of the general public by insistent promotion and propaganda and publicity which has advertised the sensational or the misleading generality deduced or manufactured by incompetent groups from non-representative cases.

They have been misled by meaningless words and phrases and slogans, coming from inexperienced and unqualified persons who have paid no attention, apparently, to the mass of reliable experience and literature and record easily available.

This has been gone into so fully in many places, including my own speeches and writing, that I shall not take up space for it here. I will merely say that, *if there had been one-tenth as much publicity for facts as there has been for incidental spectacular morbid details and for catchy slogans and for false panaceas, there would be no drug problem today.*

In other words, nine-tenths of the available and practically all of the useful information has been suppressed and kept from administrative recognition for the past three or four years.

The solution of the narcotic drug problem today lies in the encouragement and dissemination and common-sense application of all information and experience, just as the existence of the narcotic drug

situation today lies in the suppression of nine-tenths of the available information and experience.

As Mr. Crim has said, the law "*has been directed*" toward the elimination of reliable medical and scientific work and progress and education in the subject of narcotic drugs and narcotic drug addiction.

At the close of the two years, the New York Joint Legislative Investigation, its chairman, Senator George H. Whitney, summed up the findings of the investigation as to addiction in the following words:

"The curse of which is ignorance—the results of which are misery—the remedy for which is education."

In the neglect of these findings of the only open and complete investigation ever made into this subject, and in the substitution therefor of what the legislative report of the Medical Society of the State of New York at its annual convention in 1921, designated as "formularizations" prepared "ad hoc by ten men in the medical profession and a couple of lawyers," with no qualifications except ignorance upon the subject under consideration, and as has been shown their appointment to various interlocking committees lies the answer to the suppression of information for which the Assistant Attorney-General and all other honest inquirers for truth are now seeking.

In the place of consideration of and attention to the real problem of narcotics and addiction has come a few broadcasted and propagandized "formularizations" incompetent in origin, misleading in substance and presentation, and useless and calamitous in application.

Among other things the idea that narcotics (opiate), addicts in general, are degenerate and criminal is a promoted fallacy of great viciousness.

Also such misleading or unfounded phrases as "ambulatory" treatment, "hospitalization," "satisfaction of craving," and the handful of other phrases which have been cleverly used as propagandic slogans and false or misleading definitions, detracting from urgently needed real work, real education and real issues, must be in the light of available medical and sociological facts, relegated to the history of a promoting and hysterical past.

We must eliminate the promoters of spurious or unworthy specific so-called and so-advertised "cures" and "panaceas," drive out the political and commercial exploiters, and encourage the physician, medical workers, and students to once more take up the study and treatment of narcotic addiction.

The most reliable estimates from many sources (contrary to some of the propagandized statistics from certain sources) place the criminal or degenerate type of addicts as from 20 to 10 per cent of the total so afflicted. This is about the same percentage of criminal or degenerated individuals as would be found in all other medical conditions.

In other words, the real practical problem of the narcotic drug situation—*the problem which is absolutely neglected today*—is the immediate humane and scientific medical care and, so far as possible, cure of from 80 to 90 per cent of those afflicted

with opiate addiction—people who are decent and respected in their communities.

Ignore this and drive out the available humane and scientific medical care and you create a condition which has repeatedly shown as inevitable effect in every survey, report, or investigation of reliability and honesty and competency, and finally by the United States Assistant Attorney-General himself.

You create and force patrons and customers for the spurious advertised "remedies" and "cures," and for the criminal vendors of the underworld; and you increase smuggling and peddling and the corruption of officials by creating a necessity which is immediately capitalized in immensely profitable illegitimate enterprise and exploitation of the neglected needs of suffering humanity.

This is the real basis for the present situation.

There are two fundamental issues, irrespective of all the quibbles and sensational publicity promotion of morbidity and other manifestations of these periodic outbreaks which always end in creating the *drug situation*—two fundamental issues to which sooner or later there has always been forced a return of consideration:

1. How can we best take care of the narcotic addicts we have?
2. How can we best prevent the making of more addicts?

The traffic whose commercial extension is making more addicts today was created by the closure or obstruction of legitimate medical channels of study and treatment and education and, as Mr. Crim has pointed out, by the driving away of the family doctor from the care of the addicted individual.

Wise and sane administration and interpretation of laws, aided by truly educational publicity, has at times succeeded in interrupting and checking this underworld traffic by which the non-therapeutic addiction patient is created.

A certain amount of unavoidable opiate addiction through necessarily prolonged opiate medication is conceded by all reliable authorities and students to be inevitable.

The case of the returned soldier, addicted during treatment in a hospital in France, is an illustration of this, as are also some cases of cancer, operative conditions and prolonged medical emergencies in civil life, and the ordinary practice of medicine.

Nobody but a fool, a promoter, an ignoramus, or a medical or political quack would make any statement to the contrary.

There are conditions and facts which sooner or later we have to meet, and one of them is that the continued administration of an opiate drug, under whatever conditions, invariably results in the formation of a physical condition which can be met or cured or cared for by neither rules and regulations, sensational publicity, exhortation, or any other of the repeatedly offered and promoted panaceas.

The sensational publicity and some of the unjustified restrictions, periodically given to or based upon the morbid aspects of the 10 to 20 per cent

of addicted individuals, who are admittedly criminal or defective individuals, has served only to create hysteria and panic—to drive out medical and scientific progress and education and honest work and to advertise and renew and enlarge the business of the underworld exploiter and the corrupt official and the quack.

Cut out the profit for the underworld and criminal traffic and you make no new addicts through what is today the most prolific machinery of their creation. Where there is no profit there is no market for the smuggler and the peddler, and no incentive for them to extend their business.

Encourage honest attention by the family physician to the needs of the innocent afflicted, made so by unavoidable or necessary medication or by the ignorance or suppression of education which promoted sensationalism has caused and made to persist.

Thoroughly and relentlessly investigate the facts concerning all "institutions" or so-called institutions, which are treating these patients, and make their treatment conform to the same standards of humanity and medical competency that are demanded and recognized in the treatment of any other disease.

The history of institutional treatment in a majority of cases has been shown by every competent investigation to be incompetent and abortive of results.

Open up the avenues of reliable information and progress and education for the medical profession and stop their being controlled and terrorized by the incompetent or the dishonest.

If you do these things (as has been repeatedly shown) you take out of the clutches of the underworld and the ignorant or exploiting official, 80 to 90 per cent of its possible patronage and all of its profit.

For its real profit does not come from the much-advertised 10 to 20 per cent criminal type of individual addicted, but from the neglected honest and self-supporting person addicted whose family physician has been forced to abandon them and they forced into channels of exploitation and extortion.

Let the police take care of the 10 to 20 per cent criminal or degenerate addicts. Let the medical profession—the family physician, the provenly competent hospitals and scientific institutions take care of the honest addicted persons on the same basis and in the same way as they would any class of honest afflicted.

Get the only profession that can solve medical problems and care for the sick back into work in its legitimate and proper sphere without danger of oppressive administrative interference and ignorant or instigated over-regulation.

If you do these things you at once eliminate the profit from illegitimate channels of charlatan exploitation and solve the problem of smuggling and peddling.

This was the consensus of study and experience and investigation at the end of 1918, and is unquestionable preponderance of reliable opinion today. The utter failure and disastrous results of the administrative and other experiments of the last

three or four years which have ignored it, have established its fundamental importance in the control and remedy of the drug situation and its problems beyond all honest question.

The ignoring of the real needs of the narcotic drug *problem* have created the narcotic drug *situation*.

The enactment of the Eighteenth Amendment, or any other legislation concerning alcohol, had and have nothing whatever to do with it.

Our Greatest Needs—Under this head, the editor of the Journal of the Medical Society of New Jersey comments on some important features of the work which lie before the physicians of New Jersey. The points made seem to apply to the physicians of California, and are quoted as follows: "The two greatest needs of the medical profession are: 1. The insistence on the observance of the demand that none but thoroughly educated doctors shall enter its ranks and that the profession shall be more thoroughly organized for progressive and efficient service; 2. That the public shall be educated concerning the objects and aims of the profession, especially those that affect the welfare of the public in the care and protection of the lives and health of citizens and the condition of the community, as related to health.

"We need to realize today, more than ever before, and not only the greatness, but also the solemnity of our calling and the responsibilities connected therewith. Our laws, very properly, require years of preparation, at thousands of dollars' expense of those who propose to enter upon the practice of medicine, and afterwards lifelong study is necessary to keep up with the constant advance in the science and art of medicine, and that study consists largely of reading thoughtfully medical literature and mingling with our brother practitioners in medical society discussions. It is, therefore, an imperative necessity that our profession shall be far more thoroughly organized than it is at present. We have been so busy looking after the public's welfare in the work of preventive medicine, the establishing of hospitals, sanatoriums, health departments, etc., that we have neglected the duty we owe the profession and ourselves as members of it, in making ourselves better prepared to meet its responsibilities, even in our personal work for the public's welfare."

"Specific Needs: 1. That every reputable physician in New Jersey be enrolled as a member of his county's medical society and that his name be enrolled in the official list to be published by the State Society in February. That enrollment is of far more value than most doctors realize, as it largely fixes one's standing in the practice of medicine in this State and in the United States. * *

"2. That every member shall attend every meeting of his county society, if possible, and help to make it interesting and profitable. A good program should be provided for each meeting; practical papers and reports of cases should be presented and discussed. * * *

"3. That every officer and every committee of a county society shall give careful thought and unstinted time to the duties required of them by the State and county societies. The secretary or reporter should send a report of every meeting to the editor of the Journal as early as possible."

Under "Need of Educating the Public," the following: "The Illinois State Medical Society has recently appointed a committee to organize and carry on a lay publicity campaign through the newspapers of the State. Its Journal says: 'Pitiless cult-killing corrosive. Practical, ethical publicity is the redemption of the profession. Medicine has sat silently far too long. For the sake of humanity, let this campaign flourish.'"

SURGICAL TREATMENT OF DUODENAL AND GASTRIC ULCER *

By W. B. COFFEY, M. D., San Francisco
(From the Surgical Service Southern Pacific Hospital)

Text-books and current medical literature go into this subject so fully that we are academically informed, and I will not weary you with repetition. Nor shall I take up the subject from the etiological standpoint, or deal at length with various methods of treatment, or operative technique. These details are familiar to you, and medical classics have been written on the subject by others.

During our experience of the past twenty years in the Southern Pacific Hospital, we have come to the realization that the vault of the abdomen is a common field for the efforts of both the physician and the surgeon.

Outside of appendicular trouble, ulcer, either duodenal or gastric, claims the major portion of our consideration. This may be accounted for in this class of patients by unhygienic habits of living, irregularity of meals and hours of rest, and mouth infections.

By routine, all patients with gastro-intestinal disturbance fall first into the hands of the physician. The stomach mimics in symptoms its associated organs in the abdomen. Excessive pain, hyperacidity and spasm, and even gastric hemorrhage may occur where other organs, such as the gall-bladder or appendix, are involved.

Not a few well-defined ulcers, established both by clinical and X-ray methods, are shown by the Wassermann test to be of luetic origin. Ulcer may coexist with the crisis of tabes.

It is difficult, clinically, to differentiate between gastric and duodenal ulcer—often it is impossible. X-ray investigation should overcome this difficulty. Here, we must emphasize the important function, not only of the X-ray, but the roentgenologist. As the ultimate decision is frequently determined by him, he should be reliable and competent.

When is medical treatment indicated and when surgical interference? This depends upon the type of ulcer. There is a feeling that the pendulum has swung too far toward surgery.

After definite distinction is made as to the nature of the ulcer, our procedure is, as follows: If duodenal, the patient continues under medical care. This serves two purposes—the possibility of cure, or of bringing the patient to better condition for surgical interference. If gastric, it is assumed to be a surgical case.

We recognize that the symptoms of duodenal ulcer may disappear and cure take place, even without the assistance of the physician or the surgeon.

A chronic ulcer, with intervals of apparent relief from symptoms, argues against medical treatment. Relief may be obtained, but not cure. Many experienced surgeons agree with Moynihan that medical treatment but tides the patient through the exacerbation, and does not cure.

Deaver considers it is better to have an empty house than a bad tenant, and it is as unfair to claim a cure for the relief obtained by medical

treatment as it would be to say that the draining of an appendicular abscess, without removal, was a guarantee against a recurrence of appendicitis.

Duodenal Ulcer—A small, palpable, duodenal ulcer, not obstructive in its nature, nor massive in its induration, nor inflammatory with adhesions, should be left to the physician. When such small, soft, duodenal ulcers come to the operating-table, interference is often followed by unhappy sequelae.

We are all familiar with that alleged cholecystitis, clinically diagnosed, which, on operation, does not present gross evidence sustaining the clinical symptoms. The result is apt to be disquieting to both patient and surgeon, the very opposite of the uneventful recovery attending the removal of a gross lesion. This same rule holds good in duodenal ulcer.

When we find induration, adhesions, or possibility of obstructive process, caused either by kinking or by a lessening of the caliber of the duodenum, gastro-enterostomy is the preferred treatment, with pylorotomy if the patient's condition will permit.

When there is an exudate down the duodenum, or a large indurated mass with many adhesions, rendering it impossible to invaginate the stump, pylorotomy is contra-indicated.

Pylorotomy, followed by posterior anastomosis, is made in all cases where there is a large mass of doubtful character, or even a large inflammatory mass of long standing, involving glands. Here results have been extremely favorable, especially in cases where there is evidence of obstruction. Improvement has been lacking and results unfavorable in cases where the pathology is not gross, or there is not mechanical interference with the pylorus. For this reason, some surgeons have artificially obstructed the pylorus, thinking to produce the favorable conditions known to be present with obstruction.

Some patients return with distressing symptoms after ideal technical gastro-enterostomy. X-ray investigation discloses that the stomach is emptied very rapidly, and I venture the opinion that the trouble lies in the injection of acid gastric juices into the alkaline fluid of the jejunum and duodenum. The disturbed chemical balance produces spasm of the small intestine.

Symptomatic treatment, diet, and nature overcome this difficulty, and in several patients, which have come under my observation, digestion is apparently normal after a few months, or, at most, a year.

Perforation is recognized by some authorities as a cure of that duodenal ulcer. I do not believe this true. The serious crisis so impresses the patient that he is pliant to the counsel of his medical adviser, and faithful to the regulations laid down for his care. This patient is not apt to trifle with his digestive apparatus. His mental attitude is far different from that of the patient, who, obtaining immediate relief through a gastro-enterostomy, takes his restoration to health as final; is slow to seek or to comply with medical advice, and so brings discredit upon the work of the surgeon.

* Read before the San Francisco County Medical Society.

In my opinion, medical supervision is always indicated following gastro-enterostomy for either duodenal or gastric ulcer.

The age of the patient with a duodenal ulcer should be taken into consideration before deciding upon operation. Life insurance actuaries state that the average age for appearance of duodenal ulcer is forty years; the life expectancy is from twenty to twenty-five years.

Can surgery prolong that period? The patient may, in skilled hands, be relieved from symptoms. Can medical treatment give equally good results and sustain this expectancy, taking into consideration the possibility of perforation, hemorrhage, or obstructive process?

Gastric Ulcer—Discussion of the treatment of gastric ulcer seems to be limited to the method of operation.

In 1901, we recognized the fallacy of the long-arm anastomosis. Faced with the difficulties attendant upon the vicious circle, J. H. O'Connor suggested the short-arm method, and we worked up some twelve cases, which were to be reported in a meeting of the State Medical Society in 1902. Unfortunately, these records have been destroyed.

On May 7, 1902, in a paper read before the Edinburgh Chirurgical Society, F. M. Caird reported twenty-one cases operated by anterior and posterior methods, favored the posterior route, *as close to the duodenum as convenient*.

Mayo's 1902 resumé of the subject should average fourteen inches for the anterior method, and not less than ten inches for the posterior. Mayo stated:

We have made the posterior anastomosis eleven times and the anterior sixty-nine times, with equally good results. Theoretically, the posterior operation would seem the better, as one can secure the jejunum at a higher point. We have made the posterior within six inches of the origin of the jejunum, and it takes fourteen inches to form a loop for the anterior method. The making of the posterior operation so close is not a safe procedure, as, if it should become necessary to do an entero-anastomosis later, there is not sufficient room on the proximal side of the anastomotic opening for this purpose. We lost one case from this cause. In either operation, from fourteen to sixteen inches of intestine should be left on the proximal side. . . .

Later, the Mayo's called attention to the prolongation of the peritoneum, forming a fan-shaped projection or ligament supporting the jejunum, as offering a further obstacle to perfect technique. They advised, if this extended too far along the bowel, to dissect it, in order to make the anastomosis close to the ligament of Trietz.

Some years ago I had a case of this nature. I dissected the fan-shaped fold of the peritoneum back some distance, and my anastomosis did not cover the entire portion of bowel so dissected. On the sixth day, with previous good condition, my patient developed pernicious vomiting, as in the vicious circle. Lavage did not bring about relief, and on the eighth day, with intervals of from six to eight hours, volumes of fluid were still ejected.

X-ray taken in the recumbent position, with tube beneath, screened, showed that the meal would pass through the new stoma and gather in

a large mass, or ball-like shadow, proximal to the opening. On the following day, after lavage, I reopened the abdomen, but could not determine the cause of obstruction.

To all appearances, the condition was good and without any twist or edema in the bowel. I could not determine why there was a backward flow. Before leaving the table, the stomach was filled by tube. The fluid was found pouring through the anastomosis, ballooning up the proximal end to such an extent that it would kink the anastomosis. Assuming the dissected prolongation was the cause, I Lemberted the bowel. There was no further disturbance.

We discovered also that if the mesocolon had a liberal supply of fat and was attached to the line of our suturing—that is, over the anastomosis—there was a possibility of tumefaction followed by contraction of this fat. Constriction of the anastomosis or stoma followed. In this particular case the condition demonstrated that the mass of fat had contracted to such an extent as to practically obliterate the stoma. The mesocolon opening was enlarged and a enteroenterostomy performed, which is a very difficult operation with the short-arm loop. Thereafter, our technique included the attachment of the mesocolon opening on the stomach wall one-quarter to one-half inch from the anastomosis.

Any twisting in the proximal end will produce a stasis, with a condition arising almost similar to an ileus. Persistent vomiting periodically during convalescence is due, no doubt, to an edema or paralysis of this end of the bowel. In one case, with persisting vomiting, the patient was kept in partial Trendelenburg's position, and, even in sleep, the foot of the bed was considerably elevated. All vomiting disappeared, and the patient made an uneventful recovery. Excision of all saddle-back ulcers, especially those close to the cardiac end of the lesser curvature, results in arresting the peristaltic waves directly across the line, opposite the site of ulcer. This occurs even when a good section of the pars media remains, sufficient one would judge, to offer no hindrance to the passing of food.

As I said before, clinical evidence alone is not sufficient to diagnose ulcer. Before the days of the Roentgen ray, many cases were operated on clinical evidence, with resulting disaster. Intervals of rest, or freedom from pain, do not necessarily indicate cure. The tendency of all gastric ulcers, even when quiescent, is toward recurrence, and ultimately toward malignancy. I believe that surgery here is the only method of treatment, and the surgeon's hand should not be checked.

I can do no better in this respect than to quote from my namesake, Robert C. Coffey of Portland, Ore.:

Obviously, it is impossible to compare the ultimate results of medical treatment with surgical treatment, for every conservative surgeon insists that every case of peptic ulcer shall have the advantage of good medical treatment before surgery is considered. Therefore, every well-selected surgical case of gastric or duodenal ulcer represents a medical failure, or more accurately stated, repeated failures on the same patient. So, if the medical man can cure 50 per cent of the cases of ulcer, and we

as surgeons can cure 85 per cent of his failures, there seems to be no good reason for rivalry.

Granting the possibility of healing, contraction may follow with hour-glass stomach, and frequently, stenosis, especially about the pylorus, with still the possibility of the recurrence of ulcer in the scar tissue.

Here, as in the duodenum, perforation, of course, requires immediate surgical interference. The question of excision of the gastric ulcer, followed by gastroenterostomy, is still a debatable one. Most experienced surgeons believe that gastroenterostomy should be done. If ulcer is to be considered potentially carcinoma, excision would seem to be the better surgical judgment. Whether this should be immediately followed by gastroenterostomy must depend a great deal upon the judgment of the surgeon.

SUMMARY

After our many years of experience, made up of successes, errors and disappointments, we have come to the following conclusions regarding the care of patients with suspected ulcer.

1. Routine assignment to the medical service.
2. Proper differentiation between gastric and duodenal ulcers.
3. To recognize the medical and surgical types.
4. That all gastric ulcers are essentially surgical.
5. That lues must be recognized as one of the causative agents of ulcer.
6. That clinical evidence alone is not sufficient reason for surgical interference.
7. That the surgeon must ever keep in mind the part that focal infection plays. He should possess sufficient acumen to attribute to these various factors their proper place in disturbance of digestion.
8. The general practitioner, who occasionally practices operating, should keep his hands out of the upper abdomen, as he lacks the judgment only gained by long practice of surgery.
9. That the responsibility for operation rests heavily upon the roentgenologist for a possible error in non-surgical cases.
10. That surgery does not relieve the patient from the necessity for medical care following gastroenterostomy.
11. That many of the troubles encountered by the patient and many of the reflections cast upon the surgeon are due to lack of supervision and advice, following the mechanical work of surgery.
12. That many so-called medical cures of duodenal ulcer are of doubtful diagnosis, and when sufficient evidence for diagnosis is presented, clinically and by X-ray, the case is well on its way to the hand of the surgeon.

Medical Building.

Phi Rho Sigma—The members of this national medical fraternity with some thirty chapters in different states will hold a banquet at the St. Francis Hotel, Wednesday evening, June 27, at six-thirty o'clock. After the banquet the members will attend the reception to the President of the American Medical Association, at the Fairmont Hotel. Phi Rho Sigmas are requested to communicate with Charles S. French, 749 Flood building, San Francisco.

OSTEITIS FIBROSA CYSTICA OCCURRING IN A FLAT BONE

Report of a Case

By A. H. GALVIN, M. D.

Orthopedic Section, Johnston-Wickett Clinic
Anaheim, California

Our knowledge of cyst formation in the long bones dates back to 1876, when Virchow described a cyst of the humerus which he considered as being due to a liquefaction of a chondroma. Following this article there appeared one by Rindfleisch in 1886, and Hirschberg in 1889, in which they both described cysts, occurring in cases of osteomalacia. It was not, however, until 1891 that Von Recklinghausen described in detail general osteitis fibrosa cystica of the long bones, and to which his name has since been attached. From this time on, various authors have published articles and described their findings in more or less detail, both in Europe and America. Chief among American authors have been Bloodgood, Beck, Silver, Freiberg, Murphy, Percy, and Meyerding. Up to 1911, the most comprehensive work that appeared was one by Silver, in which he reviewed the subject to date, together with a bibliography. In 1918, Meyerding reported a series of nineteen cases from the Mayo Clinic. This series was not confined to single bone cysts, but included multiple cysts as well. His conclusions were similar to those arrived at by Silver. Silver in his paper says:

"The term bone cyst is used today in a more or less specific sense to designate those cases in which the formation within the bone of a cavity filled with fluid is the most prominent symptom and in which examination of the surrounding tissues and of the fluid fails to reveal any readily apparent connection with a definite disease."

Confining himself to the above definition of bone cysts, and excluding such cases arising from softening of pre-existing tumors, cysts due to infection (the so-called bone abscess), cysts due to parasites, those occurring in rarefying bone disease, those found in general osteitis fibrosa, callous cysts, and cysts in Barlow's disease, he was able to find one hundred and four cases which conformed to this definition, and from these he excluded seven, because more than one cyst was present.

The distribution of the remaining ninety-seven cases was as follows:

Femur	31	Phalanges	7
Tibia	15	Astragalus	1
Fibula	6	Calcaneus	2
Humerus	25	Metatarsal	1
Ulna	2	Clavicle	3
Radius	1	Pelvis	1
Carpal Scaphoid	1	Metacarpal	1

His table shows that the majority of cases of cyst appear in the long bones, and in these the femur and humerus show the highest percentages. Since the disease shows a predilection for the long bones, and the femur and humerus in particular, the following case occurring in a flat bone, and no other case having been found in the literature, the writer feels that it is worthy of being reported in detail.

Case No. 7431—E. B. M., aged 23, male, born in Michigan, occupation, oil worker, single.



PLATE No. 1.

This shows quite clearly the cyst of the multilocular type, likewise the fourth molar within the cyst cavity, before operation.



PLATE No. 2.

Shows the transplant with beginning osteogenesis at the posterior end of graft.

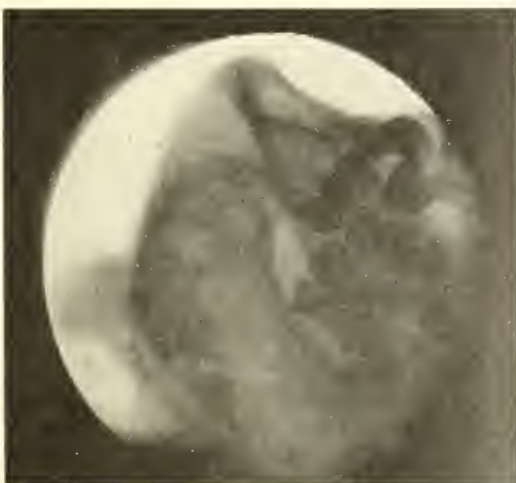


PLATE No. 3.

Showing complete absorption of transplant and cavity filled with new bone.

Family history and previous history are not important; denies venereal.

Present Illness—Two and a half years ago while scuffling with a friend he received a rather hard blow on the left lower jaw, no immediate trouble was experienced except that the jaw would drop when in certain positions. There was no pain at this time. One year later the jaw began to swell, and he had some slight soreness, but no actual pain. For the past two months he thinks the tumor has grown more rapidly.

Physical Examination—Well developed and nourished. Eyes and ears, negative. Heart, lungs and abdomen, negative. No paralysis, and reflexes normal. In the region of the angle of the left jaw is a hard tumor mass measuring $5 \times 3\frac{1}{2}$ cm., neither red nor tender. This tumor extends forward to the mental foramen, and upward to about the middle of the ramus. There is no pyorrhoea and the teeth are in good condition, with some crowns on the front upper incisors. The motions of the jaw are not restricted, no glandular enlargement. Blood pressure, 120/80. Blood, Hbg., 98 per cent; red cells, 4,720,000; leucocytes, 11,600; with a normal differential count. Wasserman, negative. Urine, negative; no Bence Jones bodies found. The roentgenograms showed a cystic formation in the bone in which could be seen an inverted third molar.

Operation—The cortex of the bone over the tumor was very thin and broke down after the skin was incised. The cavity was found filled with a brown serous fluid. It was explored, all the cysts were broken down and a transplant from the tibia inserted, reaching from the angle of the jaw to the anterior border of the cyst wall. The wound healed by first intention. Two months later he complained of some pain in his mouth with bleeding around the third molar. He was referred to the dentist, who found the tooth extremely tender, and it was accordingly extracted with immediate relief of pain.

At the present time he has no pain, no restriction of motion, and the cortex of the bone over the original tumor is firm. He has resumed his work in the oil fields and feels perfectly well. The photograph and X-ray prints show the condition before and after operation. The last roentgenogram shows that the transplant is absorbed.

The Advertising Pages—We believe that the advertising columns of a medical journal should be something more than a mere marketing place, where every Tom, Dick, and Harry who has something to sell may cry his wares, provided he has the price of the space, and where the crowd may jostle one another, each looking out for himself, and making his bargain with the seller on the old common-law principle of caveat emptor. It is our conviction that the advertising pages should be on the same plane with the rest of the journal: i. e., that they should serve the real interests of the readers; that, in perusing these pages, the reader may, in effect, walk through an exposition or exhibit of the picked products of the medical and surgical industries, where he may view the best and most approved remedies, appliances, and other armamentaria, which inventive ingenuity and manufacturing skill have devised for his assistance.

A medical journal is primarily for the benefit of the man in the field, who, in the last report, is the man that wages and wins the war against disease and death. Interesting and valuable, in their place, as the processes may be by which the armaments of warfare are worked out, the important thing to the man on the firing line is that he be furnished with efficient weapons, ready to use. By the same token, the all-important need of the medical practitioner is to be kept in constant touch with what is being prepared for him in all parts of the world, and furnished with practical, up-to-the-minute weapons, which he can utilize in his practice.—The Medical Standard, April, 1923.

THE CHOICE OF A METHOD OF SURGICAL DELIVERY AT OR NEAR FULL TERM *

By LINDSAY PETERS, M. D., Alameda, California

For many centuries, when the necessity arose for artificial termination of pregnancy during the last months, the only recourse was the so-called "classic" Caesarean section. More recently accouchement forcé and symphysiotomy were added to the resources of obstetricians. In our era of asepsis and development of refinements of surgical technique, various modifications of these methods have been evolved; for example: (1) vaginal hysterotomy was developed as an improvement over the more dangerous method of rapid cervical dilatation; (2) pubiotomy has replaced symphysiotomy; (3) Caesarean section was modified by making the incision in the fundus of the uterus, either vertically or transversely; and (4) suprapubic, extraperitoneal methods of hysterotomy were designed to avoid making a direct opening from the peritoneal cavity into the possibly infected uterine cavity; so that today, when confronted with the problem of surgical delivery, it is necessary to choose one of a number of possible methods. For each of these some definite ideas as to indications and contraindications under different conditions must be formulated.

Without reviewing the evolution of the various procedures which have led up to the methods now commonly employed, as has been done in such thorough and masterly fashion by Nicholson, and leaving out of consideration forceps operations, version and dilatation of the cervix, either manually or instrumentally, our attention will be confined to the cutting operations.

As the truly extraperitoneal methods of suprapubic hysterotomy have not been found to yield advantages commensurate with the technical difficulties of the operation, they have been practically abandoned in favor of the low, transperitoneal incision through the cervical zone of the uterus, which gives all of the real advantages of the extraperitoneal operation without its difficulties. Also, experience has shown that the fundal incisions are more prone to rupture than the median vertical incisions lower down in the uterus, so that in the present state of opinion, practically speaking, one's choice of a method of surgical delivery narrows down to one of five; namely, (1) vaginal hysterotomy (vaginal Caesarean section), (2) the low-incision-transperitoneal hysterotomy, called by De Lee laparo-trachelotomy, (3) the classic Caesarean section, in which the incision is a median vertical one in the anterior surface of the body of the uterus, (4) the Porro-Caesarean, in which hysterectomy is done, and (5) pubiotomy.

In determining the best operation to employ in any given case, the degree of danger to the life of the child, as well as to that of the mother, must be given due consideration; one should also gain as accurate as possible an estimate of the size of the child and of the capacity of the pelvis, and

when there is a disproportion so pronounced that delivery through the vagina would entail much risk of injury to the child or of extensive laceration of maternal soft parts, delivery through the abdomen is preferable when possible.

The conditions which may demand surgical delivery are:

1. Those in which there is interference with engagement and outward passage of the child, such as contractions and deformities of the pelvis, maternal tumors, abnormalities in size, shape, and presentation of the fetal parts.

2. Those in which the lives of the mother and fetus are endangered by hemorrhage or toxemia, as in the eclamptogenic toxemia of pregnancy, placenta previa, and premature detachment of the normally situated placenta.

In this discussion it is assumed that the child is alive and presumably viable. If not alive it would, as a rule, be delivered through the vagina and in many cases it would be advisable that this be preceded by craniotomy.

Each of the five procedures from which one may be required to make a choice of an operation has its peculiar advantages and disadvantages under varying conditions, and it will be our endeavor to discuss some considerations which may influence the surgeon's judgment in his election of a method under various circumstances.

In any condition in which immediate delivery is urgent prior to six weeks from term, when forceps or version cannot be employed on account of an impervious cervix, vaginal Caesarean section is the operation to be chosen, except in a patient with marked pelvic obstruction or where there are abnormalities of the child, greatly increasing its bulk. Under the conditions here given it should practically always be possible, by means of vaginal hysterotomy, to effect delivery through the natural passages without serious injury either to the mother or the child. One may resort to vaginal hysterotomy even at full term when, for any reason, abdominal delivery is not possible.

Vaginal hysterotomy has the advantage of avoiding an abdominal incision, the danger of opening the peritoneal cavity and whatever risk there may be from rupture of the uterine scar in a subsequent pregnancy. It has the disadvantage that it sometimes presents technical difficulties, and when the child is proportionately large it may entail serious damage to the child or to the maternal tissues.

The classic Caesarean section affords an easier and more rapid method of delivery than does cervical hysterotomy, either suprapubic or vaginal, but in it the incision is made through the body of the uterus, and when this incision is closed, even with the greatest care and according to the most approved technique, the resulting scar may be the site of rupture of the uterus in a future pregnancy. It is difficult, if not impossible, to determine with accuracy the frequency of this accident. Rongy's estimate of approximately 3 per cent of ruptures in pregnancies, following classic Caesarean, seems conservative. To Spalding "the conclusion seems justifiable that 10 per cent of Caesarean-section scars are defective." No case, in which the mem-

* Read before the Alameda County Medical Association, December 18, 1922.

branes are ruptured and in which there is known or suspected infection, is suitable for the classic Caesarean operation. Other unfavorable features of the classic Caesarean are that it is apt to permit soiling of the peritoneum with liquor amii, and it is quite frequently followed by adhesions between the uterine scar and the intestines, omentum, or the uterine wall. Moreover, the rhythmic contractions and involution of the uterus tend to render slack the sutures in the uterine wound, preventing its uninterrupted healing. Extreme obesity and complete placenta previa are almost the only conditions which indicate the employment of classic Caesarean.

The low-incision, transperitoneal hysterotomy, in which the opening in the uterus is confined to the cervix and lower, non-contractile zone of the uterus, combines many of the advantages of both the classic and vaginal Caesarean sections, and lacks many of their objectionable features. This operation, by making use of peritoneal flaps, which are reflected downward and upward from near the vesico-uterine sulcus and sewed to the edges of the parietal peritoneum, effectively isolates the area of operation from the peritoneal cavity, and when suturing of the uterine incision is completed the peritoneal flaps are detached from the parietal peritoneum, overlapped, and sutured at right angles to the direction of the uterine wound, thus effectually minimizing the danger of involvement of the peritoneal cavity in case the uterine wound proves to be infected. The risk of rupture in future pregnancies is almost, if not completely, eliminated; for, although the operation has now been employed extensively, only two cases of rupture in a later pregnancy have been reported.

The prevalent idea that it is an operation difficult to perform is probably due to trouble encountered in the extraperitoneal operations in which the peritoneum was dissected intact from the bladder in order to gain approach to the uterus, instead of exposing the uterus through a transperitoneal incision.

The merits of this operation, as set forth by Beck in 1919 and since by De Lee, have been recognized for some years by obstetricians, many of whom employ it almost to the complete exclusion of the classic Caesarean section, although the latter seems not to have lost favor with the general surgeons.

Though it is generally conceded that the classic Caesarean gives a low mortality for both mother and child when done in clean cases, it is also well known that when the patient has been subjected to repeated vaginal examination or examined without proper antiseptic precautions, especially when the membranes are ruptured, it is attended with grave danger of peritonitis, so that its field of usefulness is restricted by the fact that a large proportion of cases in which abdominal delivery is required have been presumably contaminated.

When the incision is made low down in the non-contractile portion of the uterus and covered by a double layer of peritoneum, the danger of peritonitis is much diminished.

Two recent articles in the *Journal of the Ameri-*

can Medical Association by De Lee and Cornell, and by King, respectively, should go far toward establishing the low, transperitoneal operation as the superior method of abdominal delivery except in rare circumstances. De Lee and Cornell report 145 cases operated upon by this method, with only one death, from eclampsia and obesity. "None of the babies died; two were dead before entry to the hospital—both from abruptio placentae."

"Many of these women had been in labor hours and days, with the bag of waters ruptured and had had vaginal examinations made; three had forceps attempts, and many were poor risks." De Lee attributes his good results to the fact that the incision was made in the lower uterine segment. He states: "There are only two cases on record of actual rupture of the scar in a later labor."

King, in his article on "The End-Results of Abdominal Caesarean Section," in discussing rupture of the uterus, says: "The frequency of this accident has been variously estimated. In our series of seventy-eight patients in whom subsequent pregnancy was possible, only twenty-three could be traced, in whom twenty-three full-term pregnancies occurred; the scar ruptured in two of these cases. Findley concludes that not more than 2 per cent of ruptures occur in subsequent labors," but gives no figures to support his contention. Holland collected statistics from twenty-six hospitals and surgeons in England, with the following results: total number of cases, 1605; followed up, 1103; no subsequent pregnancy, 613; subsequent pregnancy, 487. Outcome of the pregnancies: (1) normal delivery, 78; (2) repeated Caesarean section, 352; (3) aborted, 47; (4) patients pregnant when heard from, 86; (5) ruptured scar, 18."

"Adding 1, 2, and 5 he gets a total of 448 pregnancies at or near term, with eighteen ruptures, or an incidence of 4 per cent. But Holland apparently failed to note that 352 of these were delivered by Caesarean section. Some of them may have had the test of labor and hence a test of the scar, but this point is not mentioned. Eliminating these 352, we have ninety-six patients who were allowed to test out the cicatrix, with eighteen ruptures, or 18.75 per cent. Similarly, Gamble, in a study of sixty-three pregnancies occurring in fifty-one women previously subjected to Caesarean section, reports one ruptured scar, an incidence of 1.5 per cent. But only seventeen of these cases terminated in vaginal delivery; the other forty-five patients were again delivered by Caesarean section. Hence, the corrected figure would be one rupture out of eighteen tests of labor, or 5.5 per cent. This percentage is lower than the one obtained from Holland's larger series; but we must bear in mind that Gamble's report is based on the work of a single well-organized clinic. Holland's figures, covering the work of twenty-six different hospitals and surgeons, certainly presents a more accurate picture of the results to be expected in average hands, and serve to emphasize the fact that subsequent rupture is a real menace."

The Porro-Caesarean operation is indicated in badly infected cases, as an emergency operation to

control alarming hemorrhage from the uterus, and is often employed to avoid the repetition of pregnancy.

Pubiotomy has a field of usefulness in certain cases of moderate contraction of the pelvis, in which it is desired to permanently enlarge the diameters of the pelvis.

The following cases from the writer's personal experience illustrate some of the problems demanding a choice of method of surgical delivery:

Case 1—A twenty-year-old primipara, who had not previously had medical care in her pregnancy, was seized with a hard convulsion on getting out of bed in the morning. Before I saw her she had a second convulsion. Taken to the hospital, she had a third convulsion before preparations for delivery were made. She was five weeks from full term. She was not in labor and the cervix was long and rigid. Her husband had lost his first wife and a sister following Caesarean sections and would not consent to abdominal delivery in this case. As the convulsions had not been controlled by narcotics, it was thought best to deliver immediately and as it was impossible to manually dilate the cervix, the husband's refusal of consent to abdominal delivery left no alternative to vaginal Caesarean section, which was done. Delivery was partially effected by version, but extraction of the head was completed by forceps. This was my first vaginal Caesarean and I omitted to do an episiotomy. There were deep lacerations in both anterior and posterior vaginal walls, but these were placed in good apposition by sutures and the ultimate result was excellent. The child died after breathing one hour. Less than a year later I delivered this woman of a vigorous eight and a half pound boy after a normal pregnancy and labor.

Case 2—A twenty-six-year-old primipara was under my close observation from the fourth month of pregnancy and all went well until, in the ninth month, she disregarded instructions as to diet and indulged freely in pork. This was soon followed by slight rise in blood pressure and later by high blood pressure (188), swelling of limbs and headache. When the latter symptoms appeared she was taken to the hospital and an attempt was made to induce labor by insertion of bougies into the uterus and giving castor oil and quinine by mouth and glycerin by enema. Twelve hours later painless uterine contractions were beginning, but they had continued only a few hours when the patient without warning had a severe convulsion. Within an hour she was on the operating table. The choice of a method of delivery lay between the low, transperitoneal hysterotomy and vaginal hysterotomy. Although the pregnancy was only one month from term, vaginal hysterotomy was chosen, on account of the fact that bougies had been in the uterine cavity since the previous day and it was felt that this involved a slight liability to infection. After making a lateral episiotomy the undilated and rigid cervix was incised anteriorly for a sufficient distance to permit the passage of the head, and delivery was then effected by forceps. The child thrived and the mother's wounds healed with good approximation.

Although the result was good from vaginal hysterotomy in this case, I am of the opinion that the employment of low, suprapubic Caesarean would not have been bad judgment.

Case 3—This case, which is here sketched in brief outline, was reported in full in the American Journal of Obstetrics and Gynecology. She was a primipara thirty-five years of age. I first saw her after she had been in labor over twenty-four hours. The membranes had ruptured, but the external os was only two centimeters in diameter. At the first examination my impression was that we were dealing with a case of hydrocephalus. She was taken

to the hospital and after continuing in labor there for twelve hours the os was dilated only to the size of a dollar. Dilatation of the cervix was then manually completed, a hand was passed into the uterus and felt what seemed clearly to be a hydrocephalus. This was punctured with sharp scissors and a large amount of limpid fluid escaped. The collapsed, hair-covered sac then descended into the vagina and a portion passed outside of the vulval orifice. Strong traction on this failed to bring the head down and forceps were twice applied, but slipped off. Feeling satisfied that the obstacle to delivery had been removed by puncture of a hydrocephalus, the patient was returned to her bed, with the expectation that the child would be expelled on resumption of labor. But even after some hours of terrific pains there was no progress and it was then decided to terminate the labor.

In deliberating upon the choice of a method of delivery, vaginal Caesarean section, craniotomy and decapitation were rejected on account of the high position of the cervix, the inaccessibility of the head, the apparently large size of the child, the smallness of the vagina and the unusually firm, resistant perineum.

Low incision, transperitoneal abdominal hysterotomy was chosen as the most suitable procedure. On making a vertical incision through the anterior surface of the cervix and lower uterine segment, there escaped from the uterine cavity gas and yellow meconium, which was sponged away. The head, which lay in right occipito-posterior position, was easily delivered, followed by the collapsed sac, which was now for the first time seen to be, not a hydrocephalus, but an enormous meningocele springing from the occiput and nape of the neck.

Although pituitrin and ergotol were given by needle at the beginning of the operation the uterus failed to contract and there was a gush of blood from the uterine cavity, which was not controlled by packing and necessitated supravaginal hysterectomy.

Convalescence was complicated by signs of pneumonia of short duration and wound infection, but the patient was out of bed on the twenty-seventh day and eventually got a strongly healed wound and soon afterwards resumed her usual mode of living, and was in good health.

Case 4—A primipara, twenty-five years old, about three weeks from term, under the care of another physician, had one slight and one severe convulsion before I saw her. There was a third convulsion before she was gotten to the hospital. She was not in labor and the cervix was not dilated. A vigorous boy was delivered by low-incision, suprapubic hysterotomy. She had eight severe convulsions after delivery and for twelve hours was wildly maniacal, constantly tossing about. The inner sutures of the wound were torn out and the wound was later resutured and healed without infection. She made a good convalescence and the baby thrived.

Case 5—A primipara of twenty-one years. Although her pelvic measurements were normal, the vagina was uncommonly small. She was in labor nearly forty-eight hours without engagement of the head, which lay in R. O. P. position. As she was becoming exhausted by the long efforts at delivery, it was thought best to terminate the labor. Vaginal delivery could not have been effected without considerable danger to the mother's soft parts and great danger to the life of the child, so it was decided to deliver by a low, suprapubic Caesarean. This was done in the usual manner, with excellent results for both mother and baby.

The cause of the dystocia in this case was unusual and interesting. The parietal bosses of the child's head were very prominent and firm. All the cranial diameters were larger than normal, but especially the biparietal.

SUMMARY

In former times, when surgical delivery was necessary, classic Caesarean section was the only recourse, but today there are at least five surgical procedures which have to be considered in making a choice of method of surgical delivery; namely, vaginal hysterotomy, low-incision-transperitoneal hysterotomy, classic Caesarean section, Porro-Caesarean and pubiotomy.

Vaginal hysterotomy has the advantage of avoiding an abdominal incision, the danger of opening the peritoneal cavity and the risk of rupture of the uterine scar in a subsequent pregnancy, but involves great danger to the child and the maternal soft parts.

Classic Caesarean section affords an easier and more rapid method of delivery than does the cervical hysterotomy, either suprapubic or vaginal, but it entails the serious danger of rupture of the scar in a future pregnancy. No case in which the membranes are ruptured and in which there is known or suspected infection is suitable for the classic Caesarean operation. Other unfavorable features of this operation are that it is apt to permit soiling of the peritoneum with liquor amnii (which may be infected) and it is quite frequently followed by adhesions between the uterine scar and the intestines, omentum, or the uterine wall. Also, the rhythmic contractions and involution of the uterus tend to render slack the sutures in the uterine wound, preventing its uninterrupted healing.

The low-incision-transperitoneal hysterotomy, in which the opening in the uterus is confined to the cervix and lower, non-contractile zone of the uterus, effectively isolates the area of operation from the peritoneal cavity, and when the uterine incision is closed it is covered with peritoneal flaps which minimize the danger of involvement of the peritoneal cavity in case the uterine wound is infected. The risk of rupture in future pregnancies is almost entirely eliminated, as proved by the fact that only two cases of rupture have been reported after extensive use of the operation. The idea that it is difficult to perform is probably due to trouble encountered in the extra-peritoneal operations in which the peritoneum was dissected intact from the bladder, instead of exposing the uterus through a transperitoneal incision.

The published experiences of De Lee and Cornell and of King demonstrate the safety of the low operation, even in cases exposed to infection by vaginal examinations, forceps applications, and rupture of membranes, as well as its comparative freedom from rupture and other serious sequelae which the classic Caesarean entails.

The Porro-Caesarean is indicated in badly infected cases, as an emergency operation to control alarming hemorrhage from the uterus, and is often employed to avoid the repetition of pregnancy.

Pubiotomy has a field of usefulness in certain cases of moderate contraction of the pelvis.

From his own experience and the more extensive experience of others it appears to the author that there are few conditions in which the low-incision, transperitoneal hysterotomy would not be preferable to the classic Caesarean.

HUMAN ACTINOMYCOSIS *

By F. W. RINKENBERGER, M. D.

Actinomycosis, as a disease affecting human beings, is either not so rare as has been supposed, or is frequently overlooked or is becoming more common. Less than one hundred years have elapsed since it was first recognized in man. It was first described by Lebert in 1848, but Von Langenbeck had found it in a case of vertebral caries in 1845. Its infectious character was established by Bollinger in 1876, and the name "Actinomyces" was given to the organism or fungus by Harz, to whom it had been submitted. According to Erving, up to December, 1901, only one hundred cases had been reported in America.

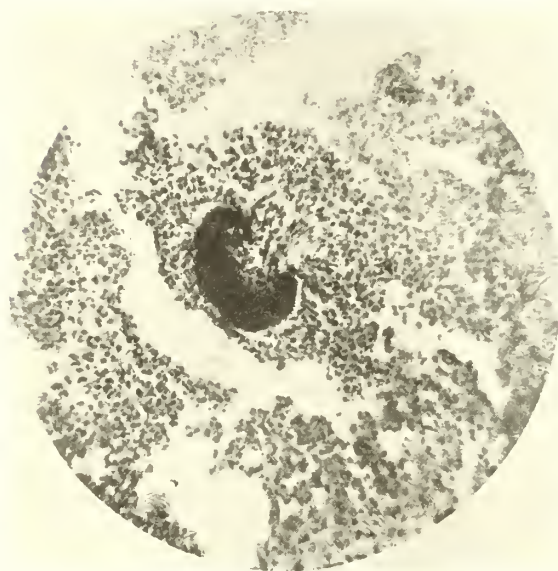
The organism is known as the ray fungus from its characteristic growth on culture media, but the dominating characteristic, as found in pus or discharges from sinuses, is the presence of peculiar yellow bodies or so-called sulphur granules. It apparently has a dual nature, existing as a saprophyte on grains, hay, straw or other materials, becoming a pathogenic organism when it affects animals or man. Many sods are supposed to be particularly badly infected by the saprophytes, and there are certain cases on record where the disease seemed to be epidemic in certain fields, notably in some reported cases in Seeland and also in certain areas along the St. Lawrence River. According to Stokes there are seven species, but in a recent paper by Colegrove, in the London Lancet, he gives four species. There has been a great deal of confusion in the classification of the organism, and at the present time the conclusions of Boestrup seem to be discredited, while those of Israel and Wolff are the commonly accepted ones today. The organism is fairly easy of cultivation according to some authorities and difficult according to others, owing to the fact of its slow growth and its being overgrown by other bacteria. It is an anaerobe. It is regarded as belonging to the group of streptothrix or cladothrix bacteria. The organism stains readily by the Ziehl-Gabbet or Gram methods, and is positive to the latter. In form there is a central granule, while at parts of the periphery of this granule club-shaped bodies are present, elsewhere filaments are present, and it is from this characteristic that the organism derives its name of ray fungus. The clubs are usually better developed in bovine than human cases.

So far as human infection is concerned, it is more common between the ages of twenty and forty, and men are affected more than twice as commonly as women. No tissue is immune, and all organs may be affected. According to Pusey the most common sites are the head and neck with about 52 per cent, abdomen about 21.6 per cent, and the lungs 13.2 per cent and the balance distributed in various portions of the body. It will thus be seen that the mouth and jaws, with the alimentary tract and the respiratory tract, are the parts most commonly affected. However, in a

* Read before the Los Angeles County Medical Society, February 1, 1923.

recent article by Griffith, he states that, in Asheville, N. C., which is a famous tuberculosis resort, there is not a lung case on record among the specialists of the city. This does not mean that there were no cases, but apparently simply a failure to recognize them.

As to the mode of infection, there is a great diversity of opinion as to whether it is contracted from infected hay, straw, or grain or by personal contact. According to Matson, in a questionnaire sent out by the Mayo Clinic to cases treated prior to January, 1917, in twenty-six answers it was shown that fifteen had contracted the disease from lower animals, that two had treated horses for suppurating wounds about the head or neck, and eleven admitted a fondness for chewing grass and straw and habitually picking their teeth with the same. Almost any domestic animal may become affected, as well as man. Naturally, it is more common in men engaged in agriculture or in the



Actinomycetic granule from case described in accompanying article.

handling of grain or domestic animals. It seems well established that infection does not take place through unbroken skin or mucous membrane, but that it can take place through any open lesion of the body and is supposed to be particularly frequent through carious teeth or diseased tonsils. The pathology is that of any of the infectious granulomata, such as may be caused by the microorganisms of tuberculosis, syphilis, leprosy or actinomycosis. Infectious granulomata, in a general way, are localized reactions to infection resulting usually, instead of in an abscess, in a nodular overgrowth or tubercle in the center of which the fungus is imbedded in an amorphous granular mass, surrounded by plasma and lymphoid elements, while giant and mast cells may be found in the neighborhood.

The incubation period is doubtful and authorities differ. According to Sutton, it is usually sev-

eral months. However, in my case, it was only about six weeks.

The general symptoms are slight and are those of a mild infection. On the surface, the most prominent characteristic is the presence of a slow-growing, chronic swelling which may be smooth or nodular, but which, however, progresses steadily until there finally appear areas of softening or of a peculiar reddish, blue color, which finally burst and discharge pus. There are usually several of these points or mouths of sinuses present in any given location. There is nothing characteristic about the discharge with the exception of the sulphur granules, and in the absence of these, the disease must be often confused with a tubercular condition, and it is not impossible that many cases are unrecognized.

The direct diagnosis depends upon the presence of the swellings before described, with the characteristic openings and presence of the granules, while in differential diagnosis, actinomycosis must be considered in connection with every chronic inflammation about the head and neck. Also in obscure lung cases where the tubercle bacillus cannot be demonstrated, actinomycosis must also be borne in mind. This applies as well to any chronic sinus in any part of the body, the nature of which is doubtful.

The prognosis varies. In lung cases it is uniformly bad. In abdominal lesions it is not good, but is better than pulmonary cases. Surface lesions ordinarily give a good prognosis, but any case must be watched, for sometimes, after an apparent cure, recurrence takes place.

The treatment is: First, where possible, surgery. The sinuses should be opened widely and, where possible, excised. In involvement of the appendix, which is not rare, it should always be removed if possible. The injection of the lesion with carbolic acid or iodine or silver nitrate has been recommended, but is infinitely inferior to the wide-open treatment. Second, the use of large doses of the iodides which have been, in the past, considered almost specific. In conjunction with iodides or surgery, the X-ray should be used. The French favor the use of copper salts. Vaccines have also been recommended in certain cases, and Collie reports a case successfully treated, after failure of the iodides, with a vaccine prepared by Sir Almroth Wright. Fördel, at the German Surgical Congress in 1908, showed six cases successfully treated with sodium cacodylate. In giving the iodides, massive doses must be used. The average twenty or thirty grain doses are useless, and three hundred grains or more a day should be given if the patient is able to stand it.

The report of my case follows:

Dr. H. G. S., age fifty years, treated a case of actinomycosis in a woman in July of last year. At that time, he was suffering from hives which he was in the habit of scratching. In August a lesion developed on the right hip, midway between the greater trochanter and the crest of the ilium, which progressed slowly. He was seen by several men and the condition considered to be tubercular. In October he came under my care, at which time

there were three or four open sinuses, in the discharge from which the granules were found. Dr. Zeiler was able to identify them in the discharge and was able to culture them as well. On October 5 I opened the mass widely, tracing it downward and backward for between four and five inches, running backward toward the spine. The mass was thoroughly cleaned out and packed with iodoform gauze, which, however, unfortunately, in about forty-eight hours, caused symptoms of iodoform poisoning, so from that time on the wound was packed with plain gauze. He was also placed on the iodides, of which he was able to take about three hundred grains daily for many days at a time. In addition, he was given heavy X-ray treatment by Dr. Duncan. The lesion cleaned up rapidly under daily packing with balsam of Peru, alternating with swabbing out with 33½ per cent solution of silver nitrate, and the large opening, which at the beginning was between four and five inches deep and almost two inches across, was finally completely closed on January 15. The patient, who is engaged in general practice, has been attending to his work since the early part of November and is today apparently well.

Abolition of Cocaine—Sir W. M. Bayliss and C. W. Salceby, in a letter to the London Times, in stating the attitude of physicians in England towards the narcotic situation consider that the abolition of the use of cocaine by international action is the only effective means of ending the evils to which this drug gives rise, and this is now feasible without detriment to any department of surgical practice.

The failure, everywhere, of all past or present methods of control is acknowledged. One of us has recently observed, in Montreal, the futility of the combined efforts of the police, the health authorities and the Custom officers, and he has returned to Europe to find similar failure alike in this country and in France. Montreal, it may be noted, is the headquarters for the illicit distribution of the drug in North America. It is evident, and for evident reasons, that so long as the drug is manufactured it will be misused. In the light of the experience of other countries, we are entirely sceptical of the success of the new legislation proposed by the Home Office.

The Committee on the Use of Cocaine in Dentistry reported in 1917 (Cd. 8489), suggesting further restrictive legislation. One of the present writers, serving on that Committee, did not sign the report, but appended a memorandum in which the view was expressed that, according to the evidence of leading dental surgeons, cocaine was no longer needed in dentistry, completely effective substitutes, such as procaine, being available.

A new synthetic substitute known for short as "butyn" has now been prepared in Chicago, and tested widely with very good results. Like procaine, it has no action on the central nervous system. A highly favorable report on its use in ophthalmic practice appeared in the British Medical Journal for January 13 last. Its introduction completes the argument advanced in 1917.

International action should, therefore, be taken to end the present manufacture of cocaine in Germany and Switzerland or elsewhere, and the cultivation of the coca plant.

Centenary of Louis Pasteur—A committee from New York sent out publicity matter and letters asking medical journals to give the centenary of Louis Pasteur news space in their journals. The trip to France, which is outlined in every detail, may be taken during the summer of 1923. Persons interested may communicate with the executive committee, 281 Fifth avenue, New York.

TUBERCULIN IN TUBERCULOUS IRITIS

By LEWIS SAYRE MACE, M. D.

Tuberculosis of the eye is secondary to tuberculosis of the lungs. In tuberculosis iritis we look for a primary focus in the lungs as confidently as we look for a similar focus in cases of tuberculous meningitis or tuberculous nephritis.

A small, healed or rather semi-healed focus in the extreme apex of a lung is able to do two things. It may at certain intervals send out deputations of living tubercle bacilli which find a favorable soil in some distant tissue. It may, and I think frequently does act as a fixed focus of infection from which no living germs escape but from which a constant stream of toxins pours forth to set up irritations, pains and inflammations in various parts of the body which bear no distinguishing characteristic of a tuberculous nature. To this class belongs the troublesome laryngitis in which no ulceration is found, and here I would place many of those cases of iritis which are evidently caused by some focal absorption but for which no focus has been found in tonsils, teeth or elsewhere.

Where tubercles are found in the eye the diagnosis is at once established but in any case of iritis due to a primary tuberculous focus that focus must be discovered, its activity established before we proceed to treat the eye by specific therapy. This is done by a careful examination of the patient including a more than careful history. A study of his chest including an X-ray which will locate the small area of fibrosis which is the cause of the trouble.

We are now ready to determine the susceptibility of the patient to tuberculin, the amount of activity of the lung focus and the proper dose for beginning the treatment all of which are shown by the test injections of tuberculin.

The choice of a tuberculin is important. It is as essential that our tuberculin be therapeutically potent as that our diagnosis be correct if we are to effect a cure. Old and inactive dilutions of tuberculin residues, emulsions, fat free and toxin free products which have long since lost any resemblance to tuberculin are worse than useless. I prefer to use the old tuberculin of Koch which is as near being a stable article of definite strength and composition as a biological product can be. The high dilutions should be prepared fresh at frequent intervals, say once per week but the dilutions down to the third decimal place can be used for a month or two without losing potency.

The first two or three injections of tuberculin are designed to reach the reaction threshold and to indicate the best dose for continued treatment. One thousandth of a milligram will usually be sufficient for this purpose. Twenty-four hours after the dose has been given the patient is observed for reactions. These are looked for first at the site of the injection, the so-called local reaction secondly at the lung focus where evidences of moisture may be found that were not heard before

* Read before the Eye, Ear, Nose and Throat Section, of the San Francisco County Medical Society, February 27, 1923.

and lastly at the iris itself which may be reddened somewhat.

It is not possible to lay down any rules as to the size of the preliminary doses. One must be guided mainly by the severity of eye symptoms, the more serious the eye process appears the smaller the initial dose must be as it is important to avoid all except the mildest reaction in diagnosis and all reactions in continued treatment. It is fair to say that in iritis it is not usually necessary to give a smaller dose than five ten-thousandths of a milligram.

When one has found the point at which a reaction appears locally accompanied by a few moist rales at the lung focus and a slight reddening of the eye one is ready to begin treatment which must continue for several months.

I know of few methods of treatment in medicine followed by such brilliant results as the treatment of tuberculous iritis with tuberculin. It goes without saying that the dosage must be correct, neither so large as to give dangerous reactions nor so small as to fail of any effect whatever. It is not possible to say what the dosage should be or how rapidly it is wise to increase it; these questions will be settled in each individual's case and are determined by the reactions and susceptibilities of each patient. One might be justified in saying that a good beginning dose would be half of the one which was found to give a reaction in the first place and that this should be increased as fast as possible without giving reactions of equal severity.

In treating iritis, an apparently local condition, it is easy to fall into the grave error of looking at the iritis as a purely local affair and to lose sight of the true condition of things, that is, tuberculosis is always a general infection and local only so far as some of its many manifestations are concerned. Any one who treats a tuberculous larynx, or a tuberculous ear or a tuberculous eye condition as a local affair only will not be successful. The disease is a general one. The very condition which we are discussing, viz. tuberculous iritis, is caused by a low grade activity in the primary lung focus. How necessary it is that every attention be given to the general infection, that all rules of regime and diet be observed, for it is only by treating the eye in this broad-minded way that a cure will be obtained. Many patients will be cured by tuberculin alone. That is a matter of luck. In most instances it will be wise to supplement the treatment by the necessary amount of rest and care as to diet and hours of work if it becomes evident that the condition is not clearing up as fast as it should.

To recapitulate. Tuberculous iritis is a local manifestation of a low grade activity in a primary lung process. This lung process is of a fibroid character, that is, an old, semi-arrested, almost inactive affair. One that is almost healed but not quite. That is to say, the very type of the trouble that responds best to the use of tuberculin. We are not surprised in such cases to see the process clear up like magic when we use tuberculin properly for all our experience has taught us that in this low grade form of activity tuberculin is the only means we have to cause a complete arrest.

The patient whom I have chosen as an illustration is in every way a typical one. She is a young woman in apparently excellent health. She is well nourished and shows no evidence whatever of being tuberculous. It is a peculiarity of eye tuberculosis that it occurs in the fat, or very well looking type. This is possibly for the reason that a large output of toxins sufficient to break down the bodily health acts as an immunizing agent to the tissues of the eye.

This patient was treated two years ago for a general arthritis for which a focus was found in the tonsils which were removed. This caused the cure of the arthritis and it was thought not without reason that the iritis from which she had also suffered would be cured also. This, however, was not the case. Shortly after leaving the hospital the old, chronic iritis from which she had suffered off and on for years returned as bad as ever.

There were no more known foci left to be removed. They had all been attended to in her many attempts to escape from her affliction, but the trouble was evidently of focal origin. We began the study of her case with a careful history. It came out that she had lost a brother from tuberculosis which was a clew, and on physical examination a spot of dullness was found at the right apex and once a few dry rales were heard at this spot.

An injection of one one-thousandth milligram of tuberculin gave us three reactions. A local one at the site of the injection, a focal one at the lung apex and a secondary focal reaction in the eye itself. An X-ray picture showed a very small area of tuberculosis at the spot where the rales were heard.

Treatment was instituted consisting of tuberculin injections and within a few weeks the eye had entirely cleared up.

It is also to be noted that the lung focus cleared up also. Evidently the eye symptoms were the visible manifestation of a low grade tuberculosis in the lung. The output of toxin from the lung focus was insufficient to cause any general immunization and was also insufficient to make the patient sick enough to call attention to the underlying cause.

Whatever may be said about the abuse of tuberculin as a therapeutic measure, and there are many who have very much to say on this subject, no one who has seen the effect of this remedy in iritis can have any doubt about its efficacy. In eye tuberculosis as in throat tuberculosis the physician can watch from day to day the effect of his dosage. He can see the reactions and accurately gauge and space his doses accordingly. I think that a proper consideration of the effect of this treatment in this class of cases should convince the most skeptical that in tuberculin we have for a certain type of tuberculosis an invaluable remedy.

Medical Banquet—The women physicians of the American Medical Association will hold a banquet in the Norman room, Fairmont Hotel, on Thursday evening, June 28, at 7 p. m. Tickets for the banquet may be obtained at time of registration for the meeting of the Association.

CLASSIFICATION OF PHYSIOTHERAPY APPARATUS AND SUGGESTIONS FOR A STANDARD EQUIPMENT *

By MABEL PENFIELD, San Francisco

The purpose of this paper is to present a classification of physiotherapy apparatus that will serve as a guide in equipping such departments. Later, I will suggest equipments for the three situations in which these methods are most used: The office of an orthopedic surgeon having only private practice; the office of a surgeon having industrial, as well as private practice; and a hospital. The paper will be confined to a discussion of machines of proved efficiency—when operated by trained technicians—and will present only the physiological results obtained, omitting the equally important and fascinating psychological effects on the patient of the technician, the machine and the atmosphere in general of the treatment room.

Hitherto physiotherapeutic apparatus has been classified according to its mechanical construction. That is, it has been labeled hydrotherapeutic apparatus if it used water to obtain results, electrotherapeutic apparatus if it used electricity, heliotherapeutic if heat or light were the medium, and mechanotherapeutic if weights or friction. And appended to the description is usually a list of the phenomenal results it achieves. But I wish to turn that classification around: name the effects that physiotherapy treatments strive to obtain, and list the apparatus accordingly as it helps toward one effect or another.

The purpose of physiotherapy is the same, of course, as that of medicine in general, namely, to aid in the restoration of normal function. But because these means of aiding the restoration are limited, the patients that can be helped are limited and fall, for the most part, into a few general classes. I venture to list them as follows:

1. Traumatic injuries to bones and soft parts. In this group fall fractures, dislocations, sprains, strains (including that mongrel "strain of the sacroiliac region"), synovitis, brucitis, contusions and lesions of nerves, myositis, contusion of muscle tissue, tendo-synovitis, some infections, particularly of hands or feet, and similar conditions.

2. Injuries to the central nervous system; in which group fall hemiplegia, infantile paralysis, and locomotor ataxia.

3. Selected cases of certain congenital conditions, as the various foot and back deformities.

4. Selected cases of patients convalescing from operations or functional diseases, especially neurasthenia.

In all these cases that fall to the physiotherapist under the supervision or instruction of physicians, there are certain specific physiological results to be obtained:

1. There is needed a stimulation of local circulation. This helps to hasten growth of bone, replacement of bruised by normal tissue, reabsorp-

tion of blood and lymph and other products of inflammation, and similar conditions such as found in fractures, sprains, contusions, arthritic joints, flat feet, dislocations, synovitis. The machines found useful for this are:

Electric bakers. These consist of semicircles of carbon filament lights, backed by tin reflectors, all set in frames of various designs. They are made in several sizes from small ones that fit an arm to large ones that will span a back. The gas bakers consist of a row of gas jets, over which is slung a hammock to hold the arm or leg, and the whole covered by a rounded tin or zinc cover.

Local massage supplements the baking and need not be described.

Thermolites consist of single high powered incandescent globes backed by reflectors that focus the rays to a point about one foot from the light.

Diathermy current from the high frequency machines. This is a current of very high voltage and such rapid alternation of polarity (over 500,000 a second) that it passes through the tissues without causing any contraction of either striped or unstriped muscle fibres. It is applied through two electrodes, one on either side of the part to be treated. The current passing directly between these two electrodes, creates, by friction, a local hyperemia—greatest in the denser tissues, as bone.

Whirlpool baths, which consist of cylindrical water-tight containers, made to fit a leg or an arm. In the sides are several inlets for the hot water that continuously pours in, swirls around the tub and flows out through a vent in the bottom.

Hot compresses.

2. There is the need of loosening cicatricial tissue and stretching or breaking such adhesions as do not necessitate an anaesthetic. Such cases are exemplified by the minute adhesions of old arthritis along the spine or other joints, septic hands, burns, skin grafts, scars from deep lacerations, chronic sciatica, and other neurites cases of long standing. The methods successfully used, besides local "friction" or massage, are:

Mechanical vibrators.

Sayre's head sling, which is especially helpful in breaking the minute adhesions between the vertebrae in cases of long standing arthritis. It is a halter, fitting comfortably under the chin and the occiput, attached to a hook in the ceiling or wall; strapped in this, seated or lying, the patient can be partially or completely suspended by means of a rope and pulleys.

Electricity from the negative Pole of a galvanic current, i. e., a direct current. This is used in loosening tough, adhesive scars. A small "active" electrode attached to the negative pole and saturated with a 10 per cent solution of sodium chloride is shaped to fit and bound upon the cicatrix; a larger "indifferent" electrode attached to the positive pole is placed at the patient's back, or under his hand. It is claimed that the effect on the tissues immediately under the active electrode are: vaso-dilatation, increased sensitiveness, liquefaction and disintegration of tissues due to the action of the current as an alkaline caustic.

3. There is the need to aid general metabolism, which may be accomplished by stimulation of the general circulation. This is often prescribed for neurasthenic patients, or those convalescing slowly from operations or long illnesses.

General massage may be helpfully supplemented by body bakers which are electric light cabinets that envelop the entire body, and are so arranged that the patient may either sit or lie.

Showers, which include douche, needle, and overhead showers, and demand a large room with con-

* Read before the Technical Specialties Section of the Medical Society of the State of California in the Fifty-first Annual Meeting in Yosemite National Park, May 16, 1922.

trol table, drains, and hot and cold water reservoirs, are useful parts of more elaborate equipment.

4. There is the need of increasing the strength and improving the co-ordination of local groups of muscles or of the general body muscles. Such treatment is indispensable in cases necessitating splints, casts, or slings; in paralyses, either peripheral or central; in posture training; chronic bruxitis; back strains; or foot conditions. Sometimes, even, it is necessary to teach entirely new co-ordination by education. Particularly is this so after a tendon transplantation, or in a case where one limited movement must be compensated for by other movements. An example of this would be training shoulder rotation to take the place of limited supination and pronation of the forearm. The equipment most helpful in these cases are:

Gymnastic apparatus, as bar stalls, rings, wall parallels (short parallel attached to the wall), pulley weights with handles overhead, shoulder high, and from the floor; special pulley machines for the fingers, wrists, ankles, and head; forearm pronators and supinators, and wrist rollers.

Bristow coils, which is a small easily handled box, equipped for faradic (or induced) current, which is slowly increased and decreased by inserting and drawing out a wire core. When the small, active electrode is applied to a nerve point and the core worked in and out, the muscle contracts in answer to the stimulated nerve. Lack of reaction to this current is the first electrical sign of "Reaction of Degeneration."

Sinusoidal current, which is a direct current made alternating by a mechanical device. The current slowly increases and decreases on the positive side, and then on the negative side—represented in graphic form by the well known sine wave—causing contraction by direct stimulation of the muscle fibres.

Interrupted galvanic and faradic currents, which cause spasmodic contraction of the stimulated muscle at the moments the current is made and broken. Interrupted galvanic is used as a test for the "Reaction of Degeneration."

Floor boards for foot and balancing exercises. The three types most in use are: (a) A straight wooden car rail for balancing exercises; (b) ladders laid on the floor for precision in foot placement (as in treating locomotor ataxia); (c) three boards about six inches wide are taken. Two of them are braced against each other, making a ridge that inverts the feet when the patient walks along with one on either board; the third board is placed parallel about sixteen inches away, tilted so that it everts the foot.

5. And lastly is the need for a stimulating or sedative effect on nerve fibres in cases of occupational neuroses and neuritis. Successful results have been obtained in these cases by the application of certain electrical currents. Whether the physiological effect is hyperemic, as some experimenters claim, or whether it is chemical and electrical, as others claim, has not been proved. But the results remain and are obtained by the use of:

Oudin high frequency or so-called "violet ray" current.

Galvanic current from the negative or positive poles. The effects obtained by application of current from the positive pole are the reverse of those obtained from the negative pole. While the negative pole increases bleeding, produces hypersensitiveness, liquefies and disintegrates tissue, is a vaso-dilator, and has an alkaline reaction; the positive pole stops bleeding, is sedative, hardens tissue, is a vaso-constrictor, and has an acid reaction.

So to choose equipment for special type of work

should be merely a checking of (1) the physiological needs to be filled, (2) the space allotted, and (3) the cost of the machines. For instance, an orthopedic surgeon, having private practice, might find this a useful combination:

Operator (which we have already taken for granted). A massage table reaching just below the operator's hips, small table and stool for hands. Local baker, large enough to span a back; pulley weights, one, two or three handles; long mirror for posture training; wand or broom stick. Optional additions are: Bristow coil; stall bars (home made); galvanic and sinusoidal machine; small diathermy and "violet ray" machine; measuring instruments and Sayre's head sling.

A physician carrying industrial as well as general private practice, might install:

Operator, necessary number of large and small tables and stools; local baker; various pulley weights and finger machines; wand or broom stick; bar stalls; large high frequency machine; Bristow coil; galvanic-sinusoidal machine, and measuring instruments. Optional additions are: Mechanical vibrator; whirlpool baths; added gymnastic apparatus.

To the above, a hospital would surely add a hydrotherapy department with tubs, showers, a sitz bath, as well as a body baker. Any and all of the appliances may be operated by properly educated and trained physiotherapy technicians acting under the supervision and instructions of physicians.

Static machines, the cautery current of the high frequency machines, and the actinic ray machines have not been mentioned. The static machines are not found in the majority of physiotherapy departments, perhaps because of their size and noise, probably because they are not completely understood by most persons. The cautery and the actinic ray machines usually are, and should be, operated by the physician himself, and not by the technician. The actinic ray machines, especially, are becoming more and more understood and used both as the air cooled model for general treatments, and the water cooled for local or prolonged treatments. These machines consist essentially in lights devised to emit only the violet rays of the spectrum. The short rays that have strong germicidal effect are employed in infections such as tonsillitis, sinusitis, mastoiditis, vaginitis, and similar conditions, as well as in conditions such as skin eruptions, psoriasis, some acne, and it constitutes part of the routine treatment for tuberculosis in many hospitals.

To sum up: Conditions falling into a physiotherapist's hands for treatment under supervision or instructions of physicians may be summarized as:

1. Traumatic injuries to bones and soft parts;
2. Injuries to the central nervous system;
3. Certain congenital conditions, and
4. Selected cases of patients convalescing from operations and functional illness.

The physiological results sought by the treatment are:

1. Stimulation of local circulation;
2. Stimulation of general circulation;
3. Loosening of cicatrices and adhesions;
4. Increase of muscle strength and improvement in co-ordination;
5. Sedative or stimulative treatment for nerves.

EDITORIALS

THE NARCOTIC SITUATION

Not only physicians but every other thinking citizen should read the article and editorial on the narcotic situation in this issue of the JOURNAL. The article on "Certain Factors to be Considered in Judging the Effects of Prohibition in Relation to the Use of Narcotics" is by Congressman Lester D. Volk of New York, and the editorial on "It is Time for All the Facts" is by Ernest S. Bishop, M. D., also of New York.

Drs. Volk and Bishop are two of the most widely known of the serious students of drug disease. Both have had exceptional opportunities and experiences with the drug "problem" and the drug "situation," and the JOURNAL believes it is rendering helpful service to the people of California in publishing these articles.

IT IS TIME FOR ALL THE FACTS

The fact that the House of Delegates of the American Medical Association at its last annual convention endorsed Congressman (Doctor) L. D. Volk's Congressional House Resolution No. 258, and that its example has been followed by so many other scientific bodies of importance, gives especial interest to his article in this issue on narcotics and the present situation.

The material of *record* quoted in this article and the statements made on the basis of other material of record shows clearly that the conditions existing today did not create themselves, but are definite *end results* of causes and factors which have created the same conditions before in New York State.

The statements made by Assistant Attorney-General Crim and the Judges of New York State and the findings of the Whitney legislative investigation in that State, show that these facts are enough a matter of record to command general knowledge and recognition.

Why are they not more generally known and recognized, and why are they not recognized in the reports and discussions from the "narcotic committees" of some of our medical organizations?

Dr. Volk says that it is because of intensive publicity stressing the sensational and ignoring the clinical and physical or reiterating certain incompetent formulae and slogans.

Of these he specifically names two phrases or definitions which have been a basis for endless dispute and not a little administrative policy and publicity. "Ambulatory treatment" and "institutional treatment," "satisfaction of craving," he says are misleading and unfounded in scientific or clinical fact, and have been cleverly used as propagandic slogans distracting from urgently needed real work, real education, and real issues.

And this he supports from the record of "institutional treatment" in the past and present.

Is it not about time that we gathered a real knowledge of available clinical and scientific in-

formation and *all* the available record of past experience and experiment?

The investigators from the lay press are gathering now and presenting information of well-established medical facts on this subject—and the various investigations of competent officials are all arriving now at the same conclusions—the need for recognition of the medical and clinical and research facts of opiate addiction.

The failure of the theories and methods in domination for the past four years is evident, and it is also evident that the present conditions were openly and repeatedly predicted as a result of those theories and methods.

If these theories and methods still persist in medical organization journalism or "committee" function, it becomes a matter for the medical profession to ask of its journalism and of its organization officialdom that it reject such theories and that it recognize medical and clinical facts and give to them as much discussion and dissemination as it gives to non-clinical matters.

Assistant Attorney-General Crim is asking for more medical data, and we know that more medical data is available. Why are not our organizations giving it to his department? Why is our organization journalism not giving it to medical men? Why are our "committees" not recognizing it?

It seems proven at last again that the solution of this "situation" lies in going back to the recognition of medical study and medical care and medical education.

Medical organizations should be the first to take the step.

Get away from phrases and slogans and propaganda and back to the teaching of *clinical medicine* in the subject of narcotic drug addiction.

Give the medical profession *all* the facts.

STRYCHNIN AND EPINEPHRIN SECRETION

Depending upon the point of view of the investigator, studies of drugs on adrenal output of epinephrin have been undertaken (1) to support the emergency theory of epinephrin secretion, (2) to determine the relation of the central (spinal cord and center) and peripheral nervous systems to the secretion, and (3), in the case of strychnin, to explain the therapeutic effects of strychnin in circulatory depression, collapse, shock, etc. The first proposition may be dispensed with at once, since it has been shown by critical investigators and physiologists that it is solely in the speculative stage, lacking adequate proof and evidence, despite the voluminous writings upon the subject. The criterion of the advocates of the emergency theory has been a symptomatic analogy, which does not meet the demands of the theory, namely, the analogy of symptoms and changes resulting from the injection of epinephrin as a drug in animals to those accompanying emotions, etc., in man. According to this kind of reasoning, it would be accurate to say that, since soda water (containing carbon dioxide) can increase gastric peristalsis

and secretion, the carbon dioxide, which is found in the body, is the regulator of gastric functions. Fortunately, every physician knows better. But, when a proposition involves the complex manipulations of physiology and the concentrations of a drug in the millionths, as has been the case in experiments on the adrenal and epinephrin, it seems to be difficult for some to dissociate the speculative and mystic features from the real facts.

The second proposition is more or less attached to the first and linked also with the third. Discussion of the peripheral nerves may be dispensed with because of the lack of agreement as to well defined effects of peripherally acting drugs on epinephrin output. On the other hand, there seems to be a center in the spinal cord for the secretion of epinephrin from the adrenal gland, for when the cord is destroyed and blood from the adrenal glands is collected under special conditions, epinephrin output is markedly diminished. Since strychnin acts on the cord, it might be expected to stimulate the epinephrin center and increase the output of epinephrin from the adrenal gland. This was originally shown to be the case by Stewart and Rogoff of the Cushing Laboratory of Experimental Medicine of Western Reserve University, Cleveland, under carefully controlled conditions, in which various factors, which may influence the detection of epinephrin, such as the blood flow in the gland, were taken into account. The action of strychnin has been confirmed recently by Schneider of the Berne Physiological Laboratory, by a somewhat different method of study. Schneider found that intraperitoneal injections of large doses of strychnin caused definite dilatation of the denervated pupil of the rabbit's eye and somewhat less of the intact pupil of the other eye.

The disappointing feature of these investigations, which report positive results with strychnin, is that near-convulsant or convulsant doses of the drug were necessary. For instance, Schneider found that no pupillary dilatation occurred until doses, which caused definite spasms of the masseter muscle, were injected. This, at once, puts the results outside of therapeutic possibilities and does not help to elucidate, if, and how, strychnin acts as a clinical circulatory stimulant in shock and collapse conditions. If strychnin could demonstrably augment the epinephrin output, when used in therapeutic doses, it might be argued that the clinical circulatory effects are indirectly dependent upon the epinephrin, which, of course, can stimulate the circulation when injected in adequate dosage. The only value of such results, as those of Schneider, for the physician is that when he has a case of strychnin poisoning with convulsions he may suppose that there is some extra, though probably inconsequential, output of epinephrin from the adrenal glands. Suffice it to say that much of the literature on epinephrin output of the adrenal gland and miscellaneous speculations on the emergency epinephrin theory are misleading and unsatisfactory.

Stewart, G. N., and Rogoff, J. M.: *J. Pharm. Exp. Therap.* 1919, 13: 95. Schneider, C.: *Biochem. Z.*, 1922, 133:373.

GOVERNOR VETOES 331

In the longest session of the Legislature in sixty-one years and the most expensive session ever held in California, Governor Richardson exercised the veto power more than any of his predecessors. Senate Bill 331, "An act to protect the public from misrepresentation, imposition, and fraud of advertising doctors," had the honor of receiving the longest veto message. All educated doctors, who have received their degrees from any recognized institution of learning, should read that veto message of Governor Richardson.

The Governor says: "I am strongly in favor of the general purpose of this bill and of letting the people know the kind of doctor they are patronizing. The misuse of the word doctor has led to much confusion and abuse. When the name Dr. Will Healem appears on an office door, on a card, or in a newspaper advertisement, it cannot be determined whether he is a dentist, a chiropractor, an osteopath, a corn doctor, a doctor of philosophy, a horse doctor, a nature-cure doctor, or a 'regular' M. D. This is a condition which should be righted, and S. B. 331 seeks to do it."

This constructive measure, the first of its kind to be introduced in any State, was prepared by the League for the Conservation of Public Health after several years of careful consideration during which an immense amount of data from patients, nurses, hospitals, social workers, physicians, and investigators showed the increasing imposition on the sick of California that is being perpetrated by "doctors" of many varieties. Through the efforts of the League the Legislature passed the bill by an overwhelming majority. The opposition, for very obvious reasons, hesitated to come into the open, but when Senate Bill 331 came before the Governor for his signature the Governor's veto message informs us that Christian Scientists, optometrists, a few fearful M. D.'s which the Governor calls "regular," osteopaths, chiropractors, and last and least suspected, a member of the State Board of Medical Examiners. The reasons urged by all of these are "as two grains of wheat hid in two bushels of chaff: you shall seek all day ere you find them, and when you have them, they are not worth the search."

Leading physicians of California, under the impression that the Governor was seeking information before taking action, went to Sacramento for a public hearing. During this hearing it was pointed out that Senate Bill 331 would not handicap any legitimate doctor or institution, would not prohibit any advertising by legitimate doctors that may now be done legally in California, but would make all advertising done by any doctor more trustworthy by requiring all doctors to show their colors.

The people have a right to assume that anyone whom the State permits to hold himself out as a "doctor" to treat or cure mental or physical ailments has certain education, technical skill, and good moral character. The Governor, in his veto message, demonstrates that, under present conditions in California, people better investigate what

kind of doctor they are patronizing before they invest money and risk life and limb.

At the hearing before the Governor the motley opponents again failed to appear, preferring to fire from ambush. The Governor humorously stated that the opponents feared that the bill was so involved and ambiguous as to be impossible of enforcement. This same reason (and for the same reason) was urged by patent medicine and adulterated food manufacturers when the Pure Food and Drugs Act was under consideration. Senate Bill 331 would prevent misbranding, enable the people to distinguish the different varieties of "doctors" and serve the public just as the Pure Food and Drugs Act does in its particular field. It was a constructive and, as the Governor states, a much needed measure. The Legislature did its duty in passing it. The only reasonable objection that we have heard to this measure to prevent doctors from parading under false pretenses is that it did not require more educational data and include the "Christian Scientists," "divine" healers, and all who treat the sick for money.

Those who are unselfishly interested in this movement for the common good will increase their efforts until this law is enacted and enforced, and masquerading practitioners, fake sanitariums, diploma mills, and advertising "doctors" who prey upon the sick shall be curbed.

A FRIENDLY CRITICISM

Under this title the Journal of the Iowa State Medical Society publishes an interesting editorial which, aside from the points emphasized, is interesting and instructive reading to all physicians who are interested in that team work which organization should insure.

The real reasons why the editor of the Iowa or any other medical journal cannot function as he should are inherent in the loose associations we call medical organization. There is no evidence indicating that more effective organization is feasible, if, indeed, it is desirable, and therefore our progress as a profession in the advancement of the cause of better medicine for everyone everywhere must depend upon the success of wisely directed publicity for ourselves and for the general reader.

It always has seemed to the editor of this Journal that we could take one important step by making the executive and administrative officer of every state and county society a salaried employee, rather than to try, as so many societies now do, to have the many details of the organization work handled by a physician actively engaged in practice, with frequent changes in personnel. Even a small county society could afford the full-time services of a competent office girl who could be trained into an efficient executive. A step of this character would quickly convert any society's office into an asset with too many angles to discuss here.

Larger societies might well engage a physician—not in practice—as a salaried executive employee. The opportunities for improvement in publicity

and many other obvious features of the usefulness of the society to its members, and to the public, probably need no elaboration.

ESTIMATES OF ATTENDANCE AT THE SAN FRANCISCO SESSION OF THE AMERICAN MEDICAL ASSOCIATION

We are frequently asked how many people will attend the convention? Of course no one can say. Some time since a letter was sent to the secretary of each of the 50 state and territorial societies, asking them for an estimate. Thirty secretaries replied. Considering these replies as an average for all states, the estimates total 3550 Fellows and 3700 others, or a total attendance of 7300.

A letter was also sent to the secretaries of all county societies in the United States, inviting them to come and asking for estimates by counties. Five hundred and fifty, from widely scattered areas, replied. Taking these estimates as an average for all counties would give nearly 8000 Fellows and about 7400 others, or 15,400 as the estimate of total attendance.

Reply postcards were sent to each individual Fellow in seven Western states. Eight hundred and seventy-five out of about 5000 replied. Accepting, again, the law of averages this indicates a registration of over 4000 Fellows from seven Western states and a somewhat smaller number of other visitors.

If we now apply the usual rules of "shrinkage" to these estimates, as good a forecast as can be made would be about 3500 Fellows, 2000 physicians who are not Fellows, and five thousand other visitors at the convention.

Caffein Intravenously—The Best of Stimulants—
Caffein, as a temporary stimulant given intravenously, is the one and only drug which in the experience of W. W. Duke, Kansas City, Mo. (Journal A. M. A., April 7, 1923), never completely fails. If given subcutaneously, however, it fails as do other stimulants. He reports the case of an old man with bronchopneumonia who suddenly took a turn for the worse and became apparently moribund. He was practically pulseless. Breathing was of the Cheyne-Stokes type, and labored during the periods of dyspnea. Large, coarse, tracheal rales were audible throughout the ward, owing to accumulation of mucus in the trachea. The patient had been given strychnin, atropin, camphorated oil, and strophanthin intravenously, and had shown no response to them whatever. Duke then gave 2 grains of caffein sodiobenzoate intravenously. The patient opened his eyes almost immediately and began to talk. He began to breathe regularly and deeply, and was troubled no further with mucus in the trachea. The pulse became strong and regular. This lasted until the following night, when he again lapsed into the state described and passed away, this time in spite of further use of caffein. This experience has been repeated many times by Duke with almost equally good temporary results. The drug has been used in moribund cardiorenal cases; in uremia associated with coma; in prostate cases with ascending infection; in uremia and coma; in bronchopneumonia with coma, and in general sepsis with coma. The result in the majority of cases has been temporary, and while the drug has often been repeated two or three times with good effect, the later doses have rarely been as effective as the first. In one case, however, caffein was repeatedly used, with the result that the patient recovered from an illness which Duke is convinced otherwise would have almost certainly terminated fatally.

Program

THE FIFTY-SECOND ANNUAL SESSION OF THE MEDICAL SOCIETY OF THE STATE OF CALIFORNIA

HELD AT SAN FRANCISCO, JUNE 21, 22, 23, 1923

OFFICERS AND COMMITTEES, 1923

H. G. Brainerd, Los Angeles, President.
T. C. Edwards, Salinas, President-Elect.
Percy T. Magan, Los Angeles, First Vice-President.
W. W. Cross, Fresno, Second Vice-President.
W. E. Musgrave, San Francisco, Secretary-Editor.
H. H. Johnson, San Francisco, Associate Secretary.
Emma W. Pope, San Francisco, Acting Associate Secretary.
Hartley F. Peart, San Francisco, General Counsel.
Hubert T. Morrow, Los Angeles, Assistant General Counsel.
Mr. William H. Barry, Superintendent of Publications.

COUNCILORS

First District—Paul M. Carrington, San Diego (1924)—San Diego, Riverside, Orange, San Bernardino, and Imperial Counties.

Second District—William H. Kiger, Los Angeles (1925)—Los Angeles, Santa Barbara, Ventura, and Kern Counties.

Third District—Garth Parker, Salinas (1923)—San Luis Obispo and Monterey Counties.

Fourth District—Fred R. DeLappe, Modesto (1925)—Fresno, Kings, Tuolumne, Merced, Mariposa, Madera, Tulare, and Stanislaus Counties.

Fifth District—Frank H. Paterson, San Jose (1923)—Santa Clara, San Mateo, San Benito, and Santa Cruz Counties.

Sixth District—Walter B. Coffey, San Francisco (1923)—San Francisco County.

Seventh District—Edward N. Ewer, Oakland (1923)—Alameda, Contra Costa, San Joaquin, and Calaveras Counties.

Eighth District—James H. Parkinson, chairman, Sacramento (1925)—Sacramento, Amador, El Dorado, Alpine, Placer, Nevada, Yuba, Sutter, Sierra, Yolo, Butte, Plumas, Lassen, Mono, Inyo, Glenn, Colusa, Tehama, Shasta, Modoc, and Siskiyou Counties.

Ninth District—James H. McLeod, Santa Rosa (1923)—Marin, Sonoma, Lake, Mendocino, Solano, Napa, Del Norte, Humboldt, and Trinity Counties.

Councilors-at-Large—O. D. Hamlin, Oakland (1925); Rene Bine, San Francisco (1923); George H. Kress, Los Angeles (1923); William T. McArthur, Los Angeles (1923); Saxton T. Pope, San Francisco (1924); C. Van Zwalenburg, Riverside (1923).

DELEGATES AND ALTERNATES TO A. M. A.

Delegates—Charles D. Lockwood, Pasadena (1924); Victor G. Veckl, San Francisco (1924); C. Van Zwalenburg, Riverside (1923); E. C. Fleischner, San Francisco (1923).

Alternates—Walter V. Brem, Los Angeles (1924); Harry J. Spiro, San Francisco (1924); Albert Soiland, Los Angeles (1923); Walter C. Alvarez, San Francisco (1923).

COMMITTEES

Committee on Scientific Program—W. E. Musgrave, chairman; Lemuel P. Adams, Oakland (1926); F. M. Pottenger, Monrovia (1923); F. F. Gundrum, Sacramento (1924); Walter V. Brem, Los Angeles (1925).

Publicity Bureau—Rene Bine, chairman; H. G. Brainerd, James H. Parkinson, Hartley F. Peart, W. E. Musgrave, Howard H. Johnson, Emma W. Pope.

Auditing Committee—Rene Bine, chairman; Saxton T. Pope.

Committee on Industrial Accident Insurance Work—James H. Parkinson, chairman; John H. Graves, Gayle G. Moseley, Hartley F. Peart, W. E. Musgrave.

Committee on Ideal Fee Schedule—Emmet Rixford, chairman; P. G. White, F. F. Gundrum, Lemuel P. Adams, Robert L. Doig, William W. Roblee, Rexwald Brown, George A. Ilare, James C. Blair.

Assistant Secretaries for Convention—Mary I. Armstrong, Dow H. Ransom, William Duffield, Fred L. Stein, George W. Dufficy, Edward C. Bull, George H. Galbraith, Jerome B. Thomas, Frederick H. Rodenbaugh, Dewey R. Powell, and Warren B. Allen.

GENERAL HEADQUARTERS AND MEETING HALLS

All meetings will be held in the Civic Auditorium. The offices of the Society in the Balboa Building will be open for business.

Information and registration offices will be maintained in the Civic Auditorium.

Hotel Whitcomb will be hotel headquarters. Council and Executive Committee meetings will be held there.

GENERAL OUTLINE OF THE MEETINGS

There will be two sessions on Friday, and three sessions on Saturday.

Uniform hours for all meetings are provided for: 10 a. m. to 12:30 p. m.; 2 to 4:30 p. m., and 8 to 10 p. m. All meetings will be held in the Civic Auditorium.

General Sessions—Two general sessions have been arranged so that all persons may attend.

Section on Medical Economics, Education, Public Health, and Hospitals—This section is held under the auspices of the League for the Conservation of Public Health. The time of this section meeting is so arranged that all may attend.

The following sections will hold one meeting each:

Section on Pathology and Bacteriology.

Section on Radiology, Roentgenology, and Radium Therapy.

Section on Industrial Medicine and Surgery.

Section on Technical Specialties—This section includes: The California Association of Physiotherapists; the California Association of Medical Social Workers; the California Association of Dietitians.

Group of Medical Sections

Section on General Medicine.

Section on Pediatrics.

Section on Neuropsychiatry.

Group of Surgical Sections

Section on General Surgery.

Section on Eye, Ear, Nose, and Throat.

Section on Urology.

Section on Orthopedic Surgery.

Section on Anesthesiology.

Section on Obstetrics and Gynecology.

Section on Dermatology and Syphilology.

Section on Anatomy.

Council Meetings

All meetings of the Council will be held in the Hotel Whitcomb.

First Meeting—Thursday, June 21, at 2 p. m.

Second Meeting—Thursday, June 21, at 8 p. m. (Dinner at 6:30 p. m. in main dining room.)

Third Meeting—Friday, June 22, at 2 p. m. (Luncheon in main dining room.)

Fourth Meeting—Saturday, June 23, at 8 p. m. (Dinner at 6:30 p. m. in main dining room.)

HOUSE OF DELEGATES

The House of Delegates will hold two meetings.

Membership

Councilors—First District, Paul M. Carrington (1924); Second District, William H. Kiger (1925); Third District, Garth Parker (1923); Fourth District, Fred R. DeLappe (1925); Fifth District, Frank H. Paterson (1923); Sixth District, W. B. Coffey (1923); Seventh District, Edward N. Ewer (1923); Eighth District, James H. Parkinson (1925); Ninth District, James H. McLeod (1923).

Councilors-at-Large—O. D. Hamlin (1925), Rene Bine (1923), George H. Kress (1923), William T. McArthur (1923), Saxton T. Pope (1924), C. Van Zwalenburg (1923).

DELEGATES

ALTERNATES

DELEGATES	ALTERNATES
	Alameda County (6)
L. P. Adams	F. H. Bowles
E. E. Brinckerhoff	Channing Hall
W. A. Clark	W. W. Channell
R. A. Glenn	Jo Hamilton
R. T. Sutherland	Sumner Everingham
Gertrude Moore	C. A. DePuy
	Butte County (1)
O. S. Stansbury	J. P. Schell
	Contra Costa County (1)
Harry L. Carpenter	L. St. John Hely
	Fresno County (2)
Guy Manson	K. J. Staniford
G. W. Walker	Frank Tillman
	Glenn County (1)
T. H. Brown	C. L. Terrill
	Humboldt County (1)
E. L. Cottrell	John N. Chain
	Imperial County (1)
W. W. Apple	Frances P. Elliott
	Kern County (1)
F. J. Gundry	Edw. A. Shaper
	Lassen-Plumas Counties (1)
Samuel M. Sproat	W. W. Peterson

Los Angeles County (23)

Donald Frick
Harlan Shoemaker
Granville MacGowan
J. Mark Lacey
Walter Huggins
Carl Rand
Raymond Taylor
William Bowman
Charles C. Browning
John P. Nuttall
A. S. Granger
Walter V. Brem
William H. Gilbert
A. J. Scott, Jr.
H. G. McNeil
F. A. Speik
Packard Thurber
Phillip Stephens
O. I. Tower
T. C. Myers
A. H. Zeiler
Joseph K. Swindt
E. M. Pallette
C. D. Lockwood

Marin County (1)

J. H. Kuser

Mendocino County (1)

Lew K. Van Allen

Merced County (1)

E. R. Fountain

Monterey County (1)

Charles T. Bullard

Napa County (1)

H. R. Coleman

Orange County (1)

Harry E. Zaiser

Placer County (1)

E. E. Ostrum

Riverside County (1)

Thomas A. Card

Sacramento County (2)

G. N. Drysdale
George J. Hall

San Benito County (1)

E. E. McKay

San Bernardino County (2)

F. H. Folkins
C. L. Curtis

San Diego County (4)

John C. Yates
Robert Pollock
George B. Worthington
A. J. Thornton

San Francisco County (16)

H. E. Alderson
W. C. Alvarez
M. O. Austin
Leo Eloesser
G. H. Evans
W. S. Franklin
H. P. Hill
Sol Hyman
E. S. Kilgore
Lovell Langstroth
Howard Morrow
William E. Stevens
V. G. Veckl
C. F. Welty
L. H. Briggs
W. W. Boardman

San Joaquin County (2)

Margaret Smyth
Dewey R. Powell

San Luis Obispo County (1)

G. David Kelker

San Mateo County (1)

W. C. Baker

Santa Barbara County (1)

Franklin R. Nuzum

Santa Clara County (2)

D. A. Beattie
James B. Bullitt

Santa Cruz County (1)

J. C. Farmer

Shasta County (1)

Ferdinand Stabel

Siskiyou County (1)

Robert H. Heaney

Solano County (1)

Middleton Stansbury

Sonoma County (1)

S. Z. Peoples

Stanislaus County (1)

E. F. Reamer

Tehama County (1)

Frank L. Doane

Tulare County (1)

Austin Miller

Tuolumne County (1)

E. H. Reid

Ventura County (1)

F. E. Blaisdell

Yolo County (1)

W. E. Bates

Yuba-Sutter Counties

T. E. Larner

Joseph M. King
F. C. Swearingen
Carl H. Parker
Wallace Reed
H. H. Heylman
Harriman Jones
F. L. Morgan
C. G. Toland
John Mackey
Roland Cummings
Henry B. Lissner
J. G. Lynch
A. W. Moore
Michael Creamer
LeRoy Sherry
Elmer Kelly
A. M. Rogers
Isaac H. Jones
Percy T. Magan
A. T. Newcomb
Robert Day
J. D. Gillis
John Barrow
V. R. Mason

A. H. Mays

Harper Peddicord

B. H. Bush

Martin McAulay

N. T. McArthur

R. A. Cushman

F. E. McCullough

Paul E. Simonds

G. Parker Dillon

Harold Zimmerman

T. F. Thorp

Philip M. Savage

Charles F. Whitmer

M. C. Harding

J. C. E. Nielsen

Clarence E. Rees

Emil F. Black

G. G. Moseley

Harry Spiro

H. C. Petersen

Hudson Smythe

R. M. Cox

F. H. Smith

George R. Luton

E. F. Holbrook

George L. Barry

S. W. Dowling

Sherman T. White

None named

P. B. Fry

J. W. Seawell

John A. Cooper

J. A. Owen, Jr.

Roy N. Fuller

William L. Hood

B. E. Merrill

M. W. Ward

T. P. Peery

FIRST MEETING OF HOUSE OF DELEGATES

Larkin Hall, Civic Auditorium, Friday, June 22,
at 8 p. m.

Order of Business

1. Calling to Order.
2. Roll Call.
3. Report of President.
4. Appointment of the Reference Committee by the President.
5. Report of the Council, by James H. Parkinson, chairman (Presented before the General Sessions).
6. Report of the Committee on Scientific Program.
7. Report of the Auditing Committee.
8. Report of Committee on Expert Medical Testimony.
9. Report of Committee on Local and State Expenditures for Medical and Sanitary Measures.
10. Report of Committee on Codification of Constitution and By-Laws of the State Medical Society.
11. Report of Committee on Industrial Accident Insurance Work.
12. Report of Committee on Ideal Fee Schedule.
13. Report of the Secretary-Editor, W. E. Musgrave (Presented before the General Sessions).
14. Unfinished Business.
15. New Business.
16. Reading and Adoption of Minutes.

SECOND MEETING OF HOUSE OF DELEGATES

Larkin Hall, Civic Auditorium, Saturday, June 23,
at 2 p. m.

Order of Business

1. Calling to Order.
2. Roll Call.
3. Announcement of the Place of Meeting, 1924.
4. Election of officers:
 - (a) Election of President-Elect
 - (b) Election of First Vice-President.
 - (c) Election of Second Vice-President.
 - (d) Election of Secretary-Editor.
 - (e) Election of Councilors.
- Third District—Incumbent, Garth Parker (appointed by Council to fill the vacancy caused by resignation of T. C. Edwards in accordance with Article V, Section 2 of by-laws)—San Luis Obispo and Monterey Counties.
- Fifth District—Incumbent, Frank H. Paterson (1923)—Santa Clara, San Mateo, San Benito, and Santa Cruz Counties.
- Sixth District—Incumbent, Walter B. Coffey (appointed by Council to fill the vacancy caused by the passing of C. G. Kenyon in accordance with Article V, Section 2 of by-laws)—San Francisco County.
- Seventh District—Incumbent, Edward N. Ewer (1923)—Alameda, Contra Costa, San Joaquin, and Calaveras Counties.
- Ninth District—Incumbent, James H. McLeod (1923)—Marin, Sonoma, Lake, Mendocino, Solano, Napa, Del Norte, Humboldt, and Trinity Counties.
- Councilors-at-Large—Rene Bine (1923); George H. Kress (1923); William T. McArthur (1923); C. Van Zwahlenburg (1923).
- (f) Election of Member on Program Committee (four years)—Incumbent, F. M. Pottenger (1923).
- (g) Election of two Delegates to A. M. A. (four authorized)—Incumbents, C. Van Zwahlenburg (1923); E. C. Fleischner (1923).
- (h) Election of two Alternates to A. M. A. (four authorized)—Incumbents, Albert Soland (1923); Walter C. Alvarez (1923).
5. Report of Reference Committee.
6. Presentation of President.
7. Presentation of President-Elect.
8. Reading and Adoption of Minutes.

GENERAL INFORMATION

Registration—The registration desk is located in the Civic Auditorium. All persons, whether members or not, are requested to register.

Information—One information desk will be maintained in the Civic Auditorium.

Guests and Visitors—All guests and visitors are requested to register. All scientific meetings are open to visitors and guests.

Membership Cards—Every member in good standing in the California State Medical Society has been issued an official membership card for 1923.

Suggestions and Constructive Criticism—The officers and committees have tried to do everything possible to make the meeting a success. Suggestions and constructive criticism calculated to make future meetings more useful will be welcomed by any of the officers.

Social Program—On account of the meeting of the A. M. A. there will be no organized social program.

GENERAL SESSIONS

H. G. BRAINERD, M. D., President,
Pacific Mutual Building, Los Angeles.
EMMA W. POPE, M. D., Acting Associate Secretary,
1016 Balboa Building, San Francisco.

FIRST MEETING

Larkin Hall, Civic Auditorium, Friday, June 22, 10 a. m.

1. *President's Annual Address*—Henry G. Brainerd, M. D., Pacific Mutual Building, Los Angeles.
2. *Address of President-Elect*—Thomas C. Edwards, M. D., 224½ Main Street, Salinas.
3. *Graduate Instruction for Physicians in General Practice*—T. C. Rontley, M. D., General Secretary, Canadian Medical Association, 127 Oakwood Avenue, Toronto, Canada.
4. *Annual Report of the Council*—James H. Parkinson, M. D., Chairman, 1601 I Street, Sacramento.
5. *Report of the Secretary-Editor*—W. E. Mungrave, M. D., 806 Balboa Building, San Francisco.

SECOND MEETING

Medical Economics, Education, and Hospitals

This Section is under the auspices of *The League for the Conservation of Public Health*.

DUDLEY SMITH, M. D., President,
Oakland.

W. T. McARTHUR, M. D., Secretary,
Los Angeles.

GENERAL MEETING

Larkin Hall, Civic Auditorium, Saturday, June 23,
10 a. m.

1. *Constant Constructive Service of the League*—Dudley Smith, M. D., Oakland.
2. *Hospital Betterment and Medical Progress*—Walter V. Brem, M. D., Los Angeles.
3. *Who's a Doctor in California?*—Celestine J. Sullivan, Executive Secretary League for the Conservation of Public Health, San Francisco.
4. *Medical Leadership and Health Progress*—Hon. Chester H. Rowell, Berkeley.
5. Name of speaker of national note, who will discuss subject of vital interest, will be announced at appropriate time.

PATHOLOGY AND BACTERIOLOGY SECTION

W. V. BREM, M. D., Chairman,
Pacific Mutual Building, Los Angeles.

ROY W. HAMMACK, M. D., Secretary,
Brockman Building, Los Angeles.

MEETING

Civic Auditorium, Friday, June 22, 2 p. m.

1. Chairman's Address and Secretary's Report.
2. Election of Section Officers and Transaction of Other Section Business.
3. *The Clinical Significance of Quantitative Determinations of the Rate of Protein Excretion in the Urine in Bright's Disease*—Thomas Addis, M. D., Lane Hospital, San Francisco.
4. *The Grading of Epitheliomata and Their Radio Sensibility*—T. C. Crowell, M. D., 1151 West Sixth Street, Los Angeles; Rex Duncan, M. D., 1151 West Sixth Street, Los Angeles.
5. *Further Studies of Germanium Dioxide in Hematopoiesis*—W. T. Cummins, M. D., Southern Pacific Hospital, San Francisco.
6. *Torula Infection*—Mona E. Bettin, M. D., Auditorium Building, Los Angeles.
7. *The Relation Between the Early Degenerative Changes and the Functional Response of the Kidney in Experimental Uranium Nephritis*—Ruth Garland, M. S., Santa Barbara; Franklin R. Nuzum, M. D., Cottage Hospital, Santa Barbara.
8. *Demonstrating the Tubercle Bacillus*—E. A. Vietors, M. D., 133 Geary Street, San Francisco.

RADIOLOGY SECTION

(Including Roentgenology and Radium Therapy)

W. B. BOWMAN, M. D., Chairman,
Brockman Building, Los Angeles.

F. H. RODENBAUGH, M. D., Secretary,
Physicians Building, San Francisco.

MEETING

Civic Auditorium, Friday, June 22, at 2 p. m.

1. Chairman's Address and Secretary's Report.
2. Election of Section Officers and Transaction of Other Section Business.
3. *Importance of Standardization of Roentgen Procedure in Examination of Digestive Apparatus*—M. P. Burnham, M. D., St. Francis Hospital, San Francisco.
4. *Roentgen Study of the Spleen in 500 Healthy Adults*—R. G. Van Nuys, M. D., Alta Bates Sanitarium, Berkeley.
5. *The Roentgen Ray as an Aid in the Practice of Obstetrics*—W. E. Chamberlain, M. D., Stanford Hospital, San Francisco.
6. *Effect of Roentgen Ray Therapy in Thyrotoxic Cases as Measured by the Basal Metabolic Rate*—J. Marion Read, Jr., M. D., 870 Market Street, San Francisco.
7. *Gastric Ulcer as a Roentgenological Study*—I. S. Ingber, M. D., 516 Sutter Street, San Francisco.
8. *Deep X-Ray Therapy in Uterine Hemorrhage*—F. H. Rodenbaugh, M. D., 516 Sutter Street, San Francisco.
9. *A Preliminary Report of the Deep Therapy Clinic at St. Luke's Hospital*—John Rehfish, M. D., 1940 Scott Street, San Francisco.
10. *The Chronic Appendix in Roentgenological Work*—Forrest C. Swearington, M. D., Pomona.
11. *The Evolution of Roentgen Therapy in Higher Voltages*—Albert Soiland, M. D., 1407 South Hope Street, Los Angeles.
12. *Bone Tumors*—Henry Snure, M. D., 1501 South Figueroa Street, Los Angeles.
13. *Observations and Results in the Recent Treatment of 300 Consecutive Cases With High Voltage X-Ray Therapy*—Edwin D. Ward, M. D., 1932 West Twenty-third Street, Los Angeles; Rex Duncan, M. D., 1151 West Sixth Street, Los Angeles.
14. *A Roentgen Demonstration of Some of the Causes of Failure of Treatment in Patients with Intestinal Intoxication*—Ray G. Taylor, M. D., 302 South St. Andrews Place, Los Angeles.

INDUSTRIAL MEDICINE AND SURGERY SECTION

PHILLIP STEPHENS, M. D., Chairman,
Pacific Electric Building, Los Angeles.

PACKARD THURBER, M. D., Secretary,
906 Black Building, Los Angeles.

MEETING

Civic Auditorium, Friday, June 22, 2 p. m.

1. Chairman's Address and Secretary's Report.
2. Election of Section Officers and Transaction of Other Section Business.
3. *Nitrous Oxide Anaesthesia in Industrial Work*—H. G. McNeil, M. D., 362 South Virgil Avenue, Los Angeles.
4. *Industrial Surgery a Specialty*—Albert W. Moore, M. D., 917 Brockman Building, Los Angeles.
5. *Fractures of the Spine*—E. W. Cleary, M. D., 177 Post Street, San Francisco.
6. *Therapy in the Neuroses Developing in Industrial Medicine*—Henry G. Mehrtens, M. D., Stanford University Hospital, San Francisco.
7. *The Second Great Type of Chronic Arthritis in Its Relation to Industrial Accident Cases*—Leonard W. Ely, M. D., Lane Hospital, San Francisco.
8. *Possibility of Remote Effects in Head Injuries*—Charles E. Mordoff, M. D., 206 Edgerly Building, Fresno.

TECHNICAL SPECIALTIES SECTION

RAY LYMAN WILBUR, M. D., Chairman,
Stanford University, Palo Alto.

CHARLES T. STURGEON, M. D., Secretary,
Merritt Building, Los Angeles.

FIRST MEETING

Civic Auditorium, Saturday, June 23, 2 p. m.

All members of the California Association of Physiotherapists; the California Association of Medical Social Workers; the California Association of Dietitians, and all other persons interested in the technical specialties are invited to attend this meeting.

1. Chairman's Address and Secretary's Report.
2. Election of Section Officers and Transaction of Other Section Business.

SECOND MEETING

Civic Auditorium, Saturday, June 23, 2 p. m.

Combined Meeting of California Association of Physiotherapists and American Physiotherapy Association.

California Association of Physiotherapists

HAZEL FURSCOTT, President,
240 Stockton Street, San Francisco.

HILDA RODWAY, Secretary,
177 Post Street, San Francisco.

American Physiotherapy Association

IGNE LOHNE, President,
Brookland, Mass.

WINEFRED TOUGAS, Secretary,
Boston, Mass.

1. Opening Address—Ray Lyman Wilbur, M. D., Stanford University, Palo Alto.
2. *The Curative Workshop in Rehabilitation* (Illustrated by Moving Pictures and Lantern Slides)—Fred H. Albee, M. D., 40 East Forty-first Street, New York City, N. Y.
3. *How to Keep Ourselves Fit*—Joel E. Goldthwait, M. D., 372 Marlboro, Boston, Mass.
4. *The Place of Manipulation and Corrective Gymnastics in Physiotherapy Treatment*—R. Tait McKenzie, M. D., 2014 Pine Street, Philadelphia, Pa.
5. *Physiotherapy in Relation to Orthopedic Problems of the Shoulder Girdle*—C. Le Roy Lowman, M. D., Brockman Building, Los Angeles.
6. *The Place of the Physiotherapist in the Treatment of Infantile Paralysis*—John C. Wilson, M. D., Baker-Detwiler Building, Los Angeles.
7. Business Meeting.

PHYSIOTHERAPY CLINIC

Hahnemann Hospital, Tuesday, June 26, 2 p. m.

THIRD MEETING

Civic Auditorium, Saturday, June 23, 2 p. m.

California Association of Medical Social Workers

MARGUERITE WALES, President,
1412 Cabrillo Avenue, Burlingame.

EDNA J. SHIRPSER, Secretary,
Children's Hospital, San Francisco.

1. President's Address and Secretary's Report.
2. Election of Officers and Transaction of Other Business.

GENERAL MEDICINE SECTION

F. F. GUNDRUM, M. D., Chairman,
Capital National Bank Building, Sacramento.

A. S. GRANGER, M. D., Secretary,
Brockman Building, Los Angeles.

MEETING

Civic Auditorium, Friday, June 22, 2 p. m.

1. Chairman's Address and Secretary's Report.
2. Election of Section Officers and Transaction of Other Section Business.
3. *Adult Equivalent of Froelich Syndrome*—George Knapp Abbott, A. B., M. D., Sanitarium.
4. *Practical Considerations in the Management of Patients Presenting Essential Hypertension*—

Ernest S. du Bray, M. D., Flood Building, San Francisco.

5. *Etiology of Gastric and Duodenal Ulcers*—George E. Ebricht, M. D., University of California Medical School, San Francisco.
6. *Heart Failure: Its Underlying Causes, Clinical Manifestations, and Treatment*—W. J. Kerr, M. D., University of California Medical School, San Francisco.
7. *A Clinical Review of Intestinal Protozoa in Stanford Medical School*—Alfred C. Reed, M. D., 350 Post Street, San Francisco, and Henry A. Wyckoff, M. D., 350 Post Street, San Francisco.
8. *Emetine Hydrochloride in the Treatment of Typhoid Fever*—John V. Barrow, M. D., Chapman Building, Los Angeles; Edward A. Franklin, M. D., Bank of Italy Building, Los Angeles.
9. *A Preliminary Report on the Treatment of Diabetes with Insulin*—W. D. Sansum, M. D., Santa Barbara Cottage Hospital, Santa Barbara.
10. *The Treatment of Hypertensive Vascular Disease*—Willard J. Stone, M. D., Chamber of Commerce Building, Pasadena.
11. *Sporotrichosis with Report of a Case*—V. R. Mason, M. D., Pacific Mutual Building, Los Angeles; Kendal P. Frost, M. D., Pacific Mutual Building, Los Angeles.
12. *Latent Stage of Gall Stones and Its Early Recognition*—Henry Herbert, M. D., 719 Hollingsworth Building, Los Angeles.

PEDIATRICS SECTION

HUGH K. BERKLEY, M. D., Chairman,
Brockman Building, Los Angeles.

EDITH BRONSON, M. D., Secretary,
Schroth Building, San Francisco.

MEETING

Civic Auditorium, Friday, June 22, 2 p. m.

1. Chairman's Address and Secretary's Report.
2. Election of Section Officers and Transaction of Other Section Business.
3. *Otitis Media in Infants and Children*—Clifford Sweet, M. D., 440 Seventeenth Street, Oakland.
4. *Recent Observations on Chorea*—Ralph H. Kuhns, M. D., 135 Stockton Street, San Francisco.
5. *Coccidioides of the Central Nervous System, Simulating Brain Tumor*—Myrl Morris, M. D., 240 Stockton Street, San Francisco.
6. *Notes on the X-Ray Treatment of Whooping Cough*—Harold K. Faber, M. D., Stanford Hospital, San Francisco; John J. Kingston, M. D., Stanford Hospital, San Francisco.
7. *The Acute Anemias of Infancy; Blood Findings and Treatment*—H. R. Hoobler, M. D., University California Hospital, San Francisco.
8. *A Resume of the Work of the San Francisco Health Centers*—William C. Hassler, M. D., 1085 Market Street, San Francisco; D. Atkinson, M. D., 240 Stockton Street, San Francisco.
9. *The Incidence of Positive Tuberculin Tests in San Francisco Children with Some Observations on the Methods of Testing*—Edith Boyd, M. D., Stanford Hospital, San Francisco; Harold K. Faber, M. D., Stanford Hospital, San Francisco.
10. *Familial Leukemia with Unusual Bony Tumor Formation*—Florence Holselaw, M. D., 240 Stockton Street, San Francisco.

SYMPOSIUM ON RICKETS

1. *The Practice of Pediatrics from the Viewpoint of the Patient*—Hugh K. Berkley, M. D., Brockman Building, Los Angeles.
 2. *An Historical Survey of the Researches on Rickets*—Ann Martin, M. D., San Leandro.
 3. *The Salt Metabolism of Rickets*—Martha Jones, Ph. D., University California Hospital, San Francisco.
 4. *Clinical Aspects of Rickets in Southern California*—Robert E. Ramsay, M. D., Marsh-Strong Building, Los Angeles.
- Discussion opened by W. A. Wood, M. D., Medical Building, Oakland.

NEUROPSYCHIATRY SECTION

ROSS J. MOORE, M. D., Chairman,
520 West Seventh Street, Los Angeles.
C. L. TRANTER, M. D., Secretary,
209 Post Street, San Francisco.

MEETING

Civic Auditorium, Friday, June 22, 2 p. m.

- Chairman's Address and Secretary's Report.
- Election of Section Officers and Transaction of Other Section Business.
- An Analysis of Some Cases of Obsession*—Edward W. Twitchell, M. D., 909 Hyde Street, San Francisco.
- Lethargic Encephalitis*—J. M. Wolfsohn, M. D., 177 Post Street, San Francisco.
- Family Periodic Paralysis*—Milton B. Lennon, M. D., 135 Stockton Street, San Francisco.
- Dermatomyositis*—Mervyn H. Hirschfeld, M. D., 731 DuBoce Avenue, San Francisco.
- Personality and Environment as Etiological Factors in the Psychoncuoses*—Charles E. Nixon, M. D., 870 Market Street, San Francisco.
- Further Experience with Dandy's Cerebral Pneumogram in the Localization of Intracranial Lesions*—E. B. Towne, M. D., Lane Hospital, San Francisco.
- The Problem of the Mentally Deficient Child in Southern California*—Henry D. Eaton, M. D., Pacific Mutual Building, Los Angeles.
- Mental Disorders Considered as Maladjustment or Broken Adaptation to the Environment*—G. E. Myers, M. D., Marsh-Strong Building, Los Angeles.
- Splanchnic Psychasthenia—Cause and Treatment*—F. M. Mikels, M. D., 801 First National Bank Building, Long Beach.
- Constitutional Psychoses Ending in Permanent Recovery*—A. J. Rosanoff, M. D., Marsh-Strong Building, Los Angeles.
- Delusions from a Psychoanalytic Standpoint*—Josephine A. Jackson, M. D., 1955 Morton Avenue, Pasadena.
- Response of Neuro-Psychiatric Cases to Re-education*—Richard Harvey, M. D., 135 Stockton Street, San Francisco.
- Early Mental Stresses*—Robert L. Richards, M. D., 240 Stockton Street, San Francisco.
- Thyrotoxicosis with Psychosis Cured by Operation*—Joseph Catton, M. D., 209 Post Street, San Francisco; Carl L. Hoag, M. D., 177 Post Street, San Francisco.
- The Neurological Features of Addisonian Anemia*—William Cole, M. D., Johnson-Wickett Clinic, Anaheim.
- The Checkered Military Career of Two Psychopaths in the Late War*—Richard S. Dewey, M. D., P. O. Box 176, R. F. D. No. 4, Los Angeles.
- Racial Differences in Intelligence*—Ernest B. Hoag, M. D., Citizens Savings Bank Building, Pasadena.

GENERAL SURGERY SECTION

STANLEY STILLMAN, M. D., Chairman,
Stanford University Hospital, San Francisco.
HARLAN SHOEMAKER, M. D., Secretary,
Marsh-Strong Building, Los Angeles

MEETING

Civic Auditorium, Friday, June 22, 2 p. m.

- Chairman's Address and Secretary's Report.
- Election of Section Officers and Transaction of Other Section Business.
- Relation of Surgery and Radiotherapy in the Treatment of Malignant Diseases*—Rex Duncan, M. D., 1151 West Sixth Street, Los Angeles.
- Aneurism Simulating Surgical Conditions*—Charles D. Lockwood, M. D., 295 Markham Place, Pasadena.
- Congenital Hypertrophic Stenosis of the Stomach in Infants; Case Reports from Children's Hospital*—Guy Cochran, M. D., Pacific Electric Building, Los Angeles.
- Some Practical Points in the Treatment of Hand Infections*—Carl L. Hoag, M. D., 177 Post Street, San Francisco.

- Some Practical Considerations in the Treatment of Fractures*—Fred R. Fairchild, M. D., Woodland.
- Adenomatous Goiter*—E. H. Schneider, M. D., 806 Chapman Building, Los Angeles.
- Fallacies and Hazards of Gall-bladder Surgery*—Andrew Stewart Lobingier, M. D., Merritt Building, Los Angeles.
- Diverticula of the Esophagus*—John Hunt Shepherd, M. D., Growers' Bank Building, San Jose.
- A Review of Acute Abdominal Conditions in the San Francisco Emergency Hospital in the Past Two Years*—Edmund Butler, M. D., 135 Stockton Street, San Francisco.
- Pyloroplasty*—J. H. Woolsey, M. D., 909 Hyde Street, San Francisco.
- The Surgical Aspect of Neurofibromatosis or Recklinghausen's Disease*—Mark L. Emerson, M. D., 1307 Broadway, Oakland.

EYE, EAR, NOSE, AND THROAT SECTION

HARVARD McNAUGHT, M. D., Chairman,
Butler Building, San Francisco.
PERCIVAL DOLMAN, M. D., Secretary,
Flood Building, San Francisco.

MEETING

Civic Auditorium, Friday, June 22, 2 p. m.

- Chairman's Address and Secretary's Report.
- Election of Section Officers and Transaction of Other Business.
- Alveola Fistula*—Merton J. Price, M. D., 870 Market Street, San Francisco.
- Foreign Bodies in the Bronchi*—Chester H. Bowers, M. D., 923 South Harvard Boulevard, Los Angeles.
- History Cards and History Taking*—George H. Kress, M. D., 245 Bradbury Building, Los Angeles.
- Acute Suppurative Labyrinthitis*—Henry J. Profant, M. D., Santa Barbara.
- Cilia in Anterior Chamber of the Eye With Case History*—Otis Allen Sharpe, M. D., 516 Sutter Street, San Francisco.

UROLOGY SECTION

ROBERT V. DAY, M. D., Chairman,
412 West Sixth Street, Los Angeles.
LOUIS CLIVE JACOBS, M. D., Secretary,
Flood Building, San Francisco.

MEETING

Civic Auditorium, Friday, June 22, 2 p. m.

- Chairman's Address and Secretary's Report.
- Election of Section Officers and Transaction of Other Section Business.
- Rare Anomalies of the Kidney with Report of Three Cases*—Joe Zeiler, M. D., 175 South Oxford Street, Los Angeles.
- Carcinoma and Hypertrophy of the Prostate with Review of Cases at the Los Angeles County Hospital for Five Years*—Jay J. Crane, M. D., 134 South Workman Street, Los Angeles.
- A Study of the Blood Supply of the Bladder in the Newborn*—Miley B. Wesson, M. D., 870 Market Street, San Francisco.
- Some Phases of Gonorrheal Complications*—James Steinberg, M. D., 509 Junior Orpheum, Los Angeles.
- The Changes of Plasma Volume in Individuals with Impaired Renal Function*—Charles P. Mathe, M. D., 2676 Greenwich Street, San Francisco; Hubert R. Arnold, M. D., St. Mary's Hospital, San Francisco.
- Syphilis of the Bladder*—Anders Peterson, M. D., Brockman Building, Los Angeles.
- Renal and Ureteral Calculi*—J. C. Negley, M. D., Haas Building, Los Angeles.
- Renal Tuberculosis*—Paul A. Ferrier, M. D., 2211 Mar Vista Avenue, Pasadena.
- The Relation of Anorectal Symptoms to the Genitourinary Tract*—Alfred J. Zobel, M. D., 210 Post Street, San Francisco.
- Some Conclusions Drawn from the Observation of Four Thousand Cases of Gonorrhea Treated in a Public Clinic*—Alfred R. Rogers, M. D., Hamburger Building, Los Angeles.

13. *Present Status of Perineal Prostatectomy*—Frank Hinman, M. D., 516 Sutter Street, San Francisco.
14. *Perirenal Haematoma with Case Report*—Leon J. Roth, M. D., 512 South Oxford Avenue, Los Angeles.

ORTHOPEDIC SURGERY SECTION

G. J. MCCHESENEY, M. D., Chairman,

Flood Building, San Francisco.

H. H. MARKEL, M. D., Secretary,
Butler Building, San Francisco.

1. Chairman's Address and Secretary's Report.
2. Election of Section Officers and Transaction of Other Section Business.
3. *Disease of Retroperitoneal Lymphatics Simulating Spondylitis*—James T. Watkins, M. D., 909 Hyde Street.
4. *Treatment of Faulty Posture by Exercises* (Illustrated by Moving Picture Slides)—H. H. Markel, M. D., Butler Building, San Francisco.
5. *Acute and Chronic Synovitis of Knee*—Rudolph L. Dresel, M. D., 29 Park Hill Avenue, San Francisco.

ANESTHESIOLOGY SECTION

E. I. LEAVITT, M. D., Chairman,

4800 Mission Street, San Francisco.

LORRULI A. RETHWILM, M. D., Secretary,
2217 Webster Street, San Francisco.

MEETING

Hotel Stewart, Friday, June 22, 2 p. m.

1. Chairman's Address and Secretary's Report.
2. Election of Section Officers and Transaction of Other Section Business.
3. *The Anesthesia Situation in California*—Edgar I. Leavitt, M. D., St. Luke's Hospital, San Francisco.
4. *The Effects of Posture on Relaxation Under Anesthesia*—Caroline B. Palmer, M. D., 2401 Sacramento Street, San Francisco.
5. *The Flexibility of Ether Vapor Anesthesia*—Lorruli A. Rethwilm, M. D., 2217 Webster Street, San Francisco.

SYMPOSIUM ON LOCAL AND REGIONAL ANESTHESIA

6. *The Use of Local Anesthesia in Major Surgery; Its Indications and Limitations*—Leo Eloesser M. D., 135 Stockton Street, San Francisco.
7. *Spinal Anesthesia*—Phillip J. Cunnane, M. D., Wright-Callander Building, Los Angeles.
8. *Ten Years' Experience with Spinal Anesthesia at San Quentin Prison*—L. L. Stanley, M. D., San Quentin.
9. *Spinal Anesthesia in Obstetrics and Cesarean Section*—Harry T. Cooke, M. D., 307 South Hill Street, Los Angeles.

American and Pacific Coast Anesthetists

The American and Pacific Coast Anesthetists will meet in conjunction with the A. M. A. The program for these meetings will be published elsewhere.

OBSTETRICS AND GYNECOLOGY SECTION

L. A. EMGE, M. D., Chairman,

Stanford University Hospital, San Francisco.

J. MORRIS SLEMONS, M. D., Secretary,
Pacific Mutual Building, Los Angeles.

MEETING

Civic Auditorium, Friday, June 22, 2 p. m.

1. Chairman's Address and Secretary's Report.
2. Election of Section Officers and Transaction of Section Business.

SYMPOSIUM ON STERILITY

3. *The Birth-rate: A Factor in National Welfare*—L. A. Emge, M. D., Stanford Hospital, San Francisco.
4. *Criminal Abortion*—Lyle McNeile, M. D., Pacific Mutual Building, Los Angeles.
5. *The Incidence of Venereal Disease in Patients Suffering with Sterility*—A. B. Spalding, M. D., Lane Hospital, San Francisco.
6. *The Significance of Cervical Pathology*—A. V. Pettit, M. D., 1499 Sutter Street, San Francisco.
7. *Disease of the Adnexal Organs*—C. W. Anderson, M. D., 421 West Adams Street, Los Angeles.
8. *Tumors and Malpositions of the Uterus*—F. W. Lynch, M. D., University California Hospital, San Francisco.

9. *The Husband as the Responsible Factor in Sterile Marriage*—A. B. Cecil, M. D., Pacific Mutual Building, Los Angeles.
10. *What Relation Exists Between the Endocrine Glands and Sterility?*—F. M. Pottenger, M. D., Monrovia.
11. *The Diagnosis and Treatment of Sterility*—Frederic Loomis, M. D., 350 Twenty-ninth Street, Oakland.

DERMATOLOGY AND SYPHILOLOGY SECTION

HOWARD MORROW, M. D., Chairman,

Butler Building, San Francisco.

MOSES SCHOLTZ, M. D., Secretary,
Brockman Building, Los Angeles.

MEETING

Civic Auditorium, Friday, June 22, 2 p. m.

1. Chairman's Address and Secretary's Report.
2. Election of Section Officers and Transaction of Other Section Business.
3. *Erythema Induratum*—Harry E. Alderson, M. D., 240 Stockton Street, San Francisco; Harry C. Coe, M. D., 240 Stockton Street, San Francisco.
4. *Methods of Applying Coal Tar in Inflammatory Dermatoses*—Lyle Kingery, M. D., Portland, Oregon.
5. *Case Report; Malignant Infection of the Skin by the Staphylococcus Pyocyanus*—Granville MacGowan, M. D., Brack Shops Building, Los Angeles.
6. *Skin Syphilis Associated with Inflammatory Skin Disease*—Kendal P. Frost, M. D., Pacific Mutual Building, Los Angeles.
7. *A Case of Malignant Tumor of the Hand; Probably Lymphangioendothelioma*—W. A. Perkins, M. D., 649 Twenty-seventh Avenue, San Francisco.
8. *Post Arspenamine Eruptions*—Hiram E. Miller, M. D., 135 Stockton Street, San Francisco.
9. *The Treatment of Keloids with Radium*—Laurence R. Taussig, M. D., 2101 Van Ness Avenue, San Francisco.
10. *Clinical Diagnosis of Syphilis*—Ernest D. Chipman, M. D., 391 Sutter Street, San Francisco.
11. *Changes in Weight in Treated Syphilis*—Irwin C. Sutton, M. D., Anaheim.
12. *Trychophyton—Three Cases in One Family (Case Report)*—Edward D. Lovejoy, M. D., Brockman Building, Los Angeles.

ANATOMY SECTION

(Including Surgical Anatomy, Embryology, and similar closely allied sciences.)

I. S. RITCHIE, M. D., Chairman,

Loma Linda Sanitarium, Loma Linda.

C. LATIMER CALLANDER, M. D., Secretary,
240 Stockton Street, San Francisco.

MEETING

Civic Auditorium, Friday, June 22, 2 p. m.

1. Chairman's Address and Secretary's Report.
2. Election of Section Officers and Transaction of Other Section Business.
3. *Aseptic Intestinal Resection*—Foster K. Collins, M. D., Baker-Detwiler Building, Los Angeles.
4. *Uterus Duplex Separatus, Report of Case*—A. E. McDowell, M. D., Marsh-Strong Building, Los Angeles.
5. *The Etiology of Epispadias and Extrophy of the Bladder with the Report of Two Rare Malformations of the Genito-urinary Tract*—Charles E. von Geldern, M. D., Forum Building, Sacramento.
6. *The Effect of Structural Changes in the Lumbar and Pelvic Regions on the Sciatic Nerve*—H. W. Chappel, M. D., 134 South Norton Avenue, Los Angeles.
7. *Anatomical Structures Encountered in the Repair of Inguinal Hernia and Rupture of the Perineum, with Special Reference to the Author's Technic*—Orville O. Witherbee, M. D., Pacific Mutual Building, Los Angeles.
8. *A Tabulation of Findings, the Result of an Anatomical Study to Determine the Modus Operandi of Manipulation Commonly Used for Relief of Pain in the Sacro Iliac Region*—Homer A. Rue, M. D., Hollingsworth Building, Los Angeles.

A CHRONOLOGIC GUIDE AND INDEX covering MEDICAL CONVENTIONS TO BE HELD IN CALIFORNIA

Thursday, June 21, to Wednesday, July 4, 1923

The California Medical Association, 52nd Annual Convention

The American Medical Association, 74th Annual Convention

The Post-Convention Program of the American Medical Association, July 2 and 3.

Other Medical Organizations meeting in San Francisco, June 22 to 29.

"Medical California," which is now on the press, will explain all programs in detail.

Thursday, June 21.

2:00 p. m.—Meeting Council California Medical Association, Whitcomb Hotel.

6:30 p. m.—Dinner, Council California Medical Association, at Whitcomb Hotel.

8:00 p. m.—Meeting of Council of California Medical Association, at Whitcomb Hotel.

Friday, June 22.

10:00 a. m.—General Meeting California Medical Association, Larkin Hall, Civic Auditorium.

2:00 p. m.—Meeting Council California Medical Association, Whitcomb Hotel.

2:00 p. m.—Section Meetings, California Medical Association, Civic Auditorium (Fourth Floor).

8:00 p. m.—House of Delegates, California Medical Association, Civic Auditorium (Larkin Hall).

Radiological Society of North America.

American Proctological Society (at Los Angeles).

American Therapeutic Society.

American Association of Anesthetists.

Pacific Coast Association of Anesthetists.

Saturday, June 23.

10:00 a. m.—League for the Conservation of Public Health, Larkin Hall, Civic Auditorium.

2:00 p. m.—House of Delegates California Medical Association, Civic Auditorium (Larkin Hall).

6:30 p. m.—Dinner, Council California Medical Association, Whitcomb Hotel.

8:00 p. m.—Meeting of Council of California Medical Association, Whitcomb Hotel.

Radiological Society of North America.

American Proctological Society (at Los Angeles).

American Therapeutic Society.

American Association of Anesthetists.

Pacific Coast Association of Anesthetists.

Sunday, June 24.

Religious Services.

8:15 p. m.—Public Meeting on Cancer, Polk Hall, Civic Auditorium.

Monday, June 25.

10:00 a. m. to 1:00 p. m.—Convention Diagnostic Clinics in the following hospitals:

University of California Hospital,

Parnassus and 3rd avenues, San Francisco.

Lane and Stanford University Hospitals,

2398 Sacramento St., San Francisco.

St. Francis Hospital,

Bush and Hyde streets, San Francisco.

San Francisco Hospital,

22nd street and Potrero avenue, San Francisco.

Southern Pacific General Hospital,

Fell and Baker streets, San Francisco.

St. Mary's Hospital,

2200 Hayes street, San Francisco.

Mary's Help Hospital,

145 Guerrero street, San Francisco.

St. Luke's Hospital,

27th and Valencia streets, San Francisco.

Hahnemann Hospital,

3698 California street, San Francisco.

Mount Zion Hospital,

Post and Scott streets, San Francisco.

Children's Hospital,

3700 California street, San Francisco.

French Hospital,

Geary street and Fifth avenue, San Francisco.

Franklin Hospital,

14th and Noe streets, San Francisco.

St. Joseph's Hospital,

Park Hill and Buena Vista avenues, San Francisco.

Fabiola Hospital,

Moss avenue and Broadway, Oakland.

Providence Hospital,

26th and Broadway, Oakland.

Samuel Merritt Hospital,

Hawthorne and Webster streets, Oakland.

9:45 a. m.—Mount Tamalpais and Muir Woods Trip with special luncheon at Tamalpais Tavern.

10:00 a. m.—San Francisco Thirty-mile Automobile Tour.

1:00 p. m.—Barbecue luncheon and Sightseeing Ride in Alameda County.

2:00 p. m.—San Francisco Thirty-mile Automobile Tour.

7:00 p. m.—Chinatown-after-dark Tours.

9:00 p. m.—Chinatown-after-dark Tours.

All Day—Golf Tournaments at the San Francisco Golf and Country Club and the Lakeside Country Club.

American Society Clinical Pathologists.

Medical Women's National Association.

American Society Tropical Medicine.

Western Society for the Study of Hay Fever, Asthma and Allergic Diseases.

American Radium Society.

American Association of Medical Milk Commissions.

Association for the Study of Internal Secretions.

Association for the Study and Prevention of Heart Disease.

American Association of Anesthetists.

Clinical Society of Neurological Surgeons.

Tuesday, June 26.

10:00 a. m. to 1:00 p. m.—Convention Diagnostic Clinics in the following hospitals:

University of California Hospital,

Parnassus and 3rd avenues, San Francisco.

Lane and Stanford University Hospitals,

2398 Sacramento St., San Francisco.

St. Francis Hospital,

Bush and Hyde streets, San Francisco.

San Francisco Hospital,

22nd street and Potrero avenue, San Francisco.

Southern Pacific General Hospital,

Fell and Baker streets, San Francisco.

St. Mary's Hospital,

2200 Hayes street, San Francisco.

Mary's Help Hospital,

145 Guerrero street, San Francisco.

St. Luke's Hospital,

27th and Valencia streets, San Francisco.

Hahnemann Hospital,

3698 California street, San Francisco.

Mount Zion Hospital,

Post and Scott streets, San Francisco.

Children's Hospital,

3700 California street, San Francisco.

French Hospital,

Geary street and Fifth avenue, San Francisco.

Franklin Hospital,

14th and Noe streets, San Francisco.

St. Joseph's Hospital,

Park Hill and Buena Vista avenues, San Francisco.

Fabiola Hospital,

Moss avenue and Broadway, Oakland.

Providence Hospital,

26th and Broadway, Oakland.

Samuel Merritt Hospital,

Hawthorne and Webster streets, Oakland.

Livermore Sanitarium,

Livermore.

9:45 a. m.—Mount Tamalpais and Muir Woods Trip with special luncheon at Tamalpais Tavern.

10:00 a. m.—San Francisco Thirty-mile Auto Tour.

10:00 a. m.—Executive Board, Women's Auxiliary of the A. M. A.

1:30 p. m.—Oakland, Berkeley and Piedmont Auto Tour.

2:00 p. m.—San Francisco Thirty-mile Auto Tour.

4:00 to 6:00 p. m.—Tea for all Women Visitors.

8:15 p. m.—General Opening Meeting, A. M. A.

All Day—Golf Tournaments.

Presidio Golf Club.

California Golf Club.

Claremont Country Club.

Berkeley Country Club.

Sequoia Country Club.

American Society Clinical Pathologists.

Medical Women's National Association.

American Society Tropical Medicine.

American Radium Society.

American Association of Medical Milk Commissions.

Association for the Study of Internal Secretions.

Association for the Study and Prevention of Heart Disease.

American Association of Anesthetists.

Medical Veterans of the World War.

Clinical Society of Neurological Surgeons.

Wednesday, June 27

9:00 a. m.—Meetings of Sections on Practice of Medicine; Obstetrics, Gynecology and Abdominal Surgery; Laryngology, Otolaryngology and Rhinology; Pathology and Physiology; Stomatology; Urology; Orthopedic Surgery; Gastro-Enterology and Proctology.

9:45 a. m.—Mount Tamalpais and Muir Woods Trip, with special luncheon at Tamalpais Tavern.

10:00 a. m.—San Francisco Thirty-mile Auto Tour.

1:00 p. m.—Luncheon for Women Visitors, at Tait's-at-the-Beach.

- 2:00 p. m.—Meetings of Sections on Surgery, General and Abdominal; Ophthalmology; Diseases of Children; Pharmacology and Therapeutics; Nervous and Mental Diseases; Dermatology and Syphilology; Preventive and Industrial Medicine and Public Health.
- 4:00 to 6:00 p. m.—Afternoon Reception.—American Association University Women.
- 6:30 p. m.—Dinner to President de Schweinitz (Section on Ophthalmology).
- 6:30 p. m.—Phi Chi Dinner.
- 9:00 p. m.—Reception to the President.

Thursday, June 28.

- 9:00 a. m.—Meetings of Sections on Practice of Medicine—Obstetrics, Gynecology and Abdominal Surgery; Laryngology, Otolaryngology and Rhinology; Pathology and Physiology; Stomatology; Urology; Orthopedic Surgery; Gastro-Enterology and Proctology.
- 9:45 a. m.—Mount Tamalpais and Muir Woods Trip with special luncheon at Tamalpais Tavern.
- 10:00 a. m.—San Francisco Thirty-mile Auto Tour.
- 10:00 a. m.—General Meeting Women's Auxiliary, A. M. A.
- 1:00 p. m.—Luncheon, Alpha Epsilon Iota.
- 1:30 p. m.—Auto Tour for Women Visitors.
- 2:00 p. m.—Meetings of Sections on Surgery, General and Abdominal; Ophthalmology; Diseases of Children; Pharmacology and Therapeutics; Nervous and Mental Diseases; Dermatology and Syphilology; Preventive and Industrial Medicine and Public Health.
- 4:00 to 6:00 p. m.—Teas in Private Homes.
- 7:00 p. m.—Medical Dinner.
- 7:00 p. m.—Dinner, Pediatric Section.
- 7:00 p. m.—Dinner, Women Fellows, A. M. A.
- 7:00 p. m.—Dinner, American Society for the Control of Cancer.
- 7:00 p. m.—Dinner-Dance, Members Ear, Nose and Throat Section.
- 7:00 p. m.—Nu Sigma Nu Jinks.
- 7:00 p. m.—Phi Beta Pi Dinner and Entertainment.
- 7:00 p. m.—Alpha Kappa Kappa Dinner.
- 7:00 p. m.—Chinatown-after-dark Tours.
- 9:00 p. m.—Chinatown-after-dark Tours.

Friday, June 29.

- 9:00 a. m.—Meetings of Sections on Practice of Medicine; Obstetrics, Gynecology and Abdominal Surgery; Laryngology, Otolaryngology and Rhinology; Pathology and Physiology; Stomatology; Urology; Orthopedic Surgery; Gastro-Enterology and Proctology.
- 9:45 a. m.—Mount Tamalpais and Muir Woods Trip with special luncheon at Tamalpais Tavern.
- 10:00 a. m.—San Francisco Thirty-mile Auto Tour.
- 1:00 p. m.—Stanford University and Peninsular Tour.
- 2:00 p. m.—Meetings of Sections on Surgery, General and Abdominal; Ophthalmology; Diseases of Children; Pharmacology and Therapeutics; Nervous and Mental Diseases; Dermatology and Syphilology; Preventive and Industrial Medicine and Public Health.
- 2:00 to 4:00 p. m.—Stanford University Medical Center.
- 2:00 to 10:00 p. m.—Open House for Masons.
- 3:30 p. m.—Organ Recital in Memorial Church, Stanford University.
- 4:00 to 6:00 p. m.—President and Mrs. Ray Lyman Wilbur, At Home, President's House, Stanford University.
- 7:00 p. m.—Chinatown-after-dark Tours.
- 7:30 p. m.—American Medical Golfing Association Banquet.
- 9:00 p. m.—Chinatown-after-dark Tours.
- All Day—Golf Tournaments at Menlo Golf and Country Club.

Saturday, June 30.

- 9:45 a. m.—Mount Tamalpais and Muir Woods Trip.
- 10:00 a. m.—Del Monte Week-end Trips.
- 12:30 p. m.—Mare Island Navy Yard and Hospital Tour.
- 1:30 p. m.—Oakland, Berkeley and Piedmont Tours.
- 7:30 p. m.—Bohemian Club Dinner and Jinks.
- 11:00 p. m.—Yosemite Valley Week-end Trip.

Sunday, July 1

- Religious Services.
- 11:00 a. m.—Peninsula Auto Tour for men, with Barbecue Luncheon at Family Farm.
- All Day—Golf Tournament and Exhibition Polo at Del Monte.

Monday, July 2.

- Fresno County:**
- 10:00 a. m. to 10:00 p. m.—Clinics and Hospitality Program, Fresno.
- 6:30 p. m.—Public Dinner and Public Health Speaking, Fresno.

Los Angeles County:

- 10:00 a. m. to 1:00 p. m.—Post-Convention Diagnostic Clinics in the following hospitals:
- White Memorial Hospital, Los Angeles.
- Los Angeles County Hospital, Los Angeles.
- Methodist Hospital, Los Angeles.
- Children's Hospital, Los Angeles.
- St. Vincent's Hospital, Los Angeles.
- California Lutheran Hospital, Los Angeles.
- Seaside Hospital, Long Beach.

- Afternoon—Golf Tournaments, Los Angeles Country Club.
- Golf at all country clubs, Los Angeles.
- Afternoon—Sightseeing Drive and Tea at the Wilshire Country Club, Los Angeles.
- 8:15 p. m.—General Meeting, Trinity Auditorium, Los Angeles.

Sacramento County:

- 10:00 a. m. to 1:00 p. m.—Clinics, Sacramento County Medical Society, Sacramento.
- 1:00 p. m.—Luncheon, Sacramento County Medical Society.
- 7:00 p. m.—Dinner with Public Health Speaking, Sacramento.

San Diego County:

- 10:00 a. m. to 1:00 p. m.—Clinics, San Diego County and St. Joseph's Hospitals, San Diego.
- Afternoon—Series of Sightseeing Drives, San Diego.
- Afternoon—Golf, on several fine courses, San Diego.
- 6:30 p. m.—Banquet, San Diego County Medical Society.

San Joaquin County:

- 10:00 a. m. to 1:00 p. m.—Clinics, San Joaquin County Medical Society, Stockton.
- 1:00 p. m.—Luncheon, San Joaquin County Medical Society, Stockton.
- Afternoon—Golf, Stockton.

Santa Barbara County:

- 10:00 a. m. to 1:00 p. m.—Clinics Cottage Hospital, Santa Barbara.
- 1:00 p. m.—Luncheon, Santa Barbara.

Sonoma County:

- 10:00 a. m. to 1:00 p. m.—Clinics, Sonoma County Medical Society.
- 1:00 p. m.—Luncheon, Sonoma County Medical Society, Santa Rosa.
- Afternoon—Sightseeing Rides, Sonoma County.
- 6:30 p. m.—Public Banquet and Public Health Speaking, Santa Rosa.

Tuesday, July 3.**Los Angeles County:**

- 10:00 a. m. to 1:00 p. m.—Post-Convention Clinics in the following Hospitals:
- Los Angeles County Hospital, Los Angeles.
- White Memorial Hospital, Los Angeles.
- Hospital of the Good Samaritan, Los Angeles.
- Methodist Hospital, Los Angeles.
- Children's Hospital, Los Angeles.
- St. Vincent's Hospital, Los Angeles.
- California Lutheran Hospital.
- Seaside Hospital, Long Beach.
- 1:00 p. m.—Luncheon, Virginia Hotel, Long Beach.
- Afternoon—Golf and Entertainment, Virginia Country Club, Long Beach.
- Afternoon—Automobile Ride and Visit to Motion Picture Studios, Los Angeles.
- 4:00 p. m.—Tea, Los Angeles Country Club.
- 7:00 p. m.—Dinner and Entertainment, Virginia Hotel, Long Beach.
- 8:00 p. m.—Pageant, Exposition Park, Los Angeles, Arranged by Motion Picture People.
- 9:00 p. m.—Dance, Virginia Hotel, Long Beach.
- All Day—Golf Tournament, Virginia Country Club, Long Beach.

San Diego County:

- 10:00 a. m. to 1:00 p. m.—Clinics, U. S. Naval Hospital, San Diego.
- 1:00 p. m.—Luncheon, U. S. Naval Hospital, San Diego.
- Afternoon—Golf on several fine courses, San Diego.

Wednesday, July 4.

- Golf Tournament, Chula Vista Club, San Diego.

THE ASSOCIATION FOR THE STUDY OF INTERNAL SECRETIONS**Meeting in San Francisco, June 25 and 26**

William Engelbach, president University Club Building, St. Louis, Mo.; H. Lissner, vice-president, Schroth Building, San Francisco; F. M. Pottenger, secretary-treasurer, 1045-6-7 Title Insurance Building, Los Angeles.

Committee on Arrangements—H. Lissner, Schroth Building.

The Association for the Study of Internal Secretions is an international organization, consisting of clinicians and laboratory workers who are interested in the scientific development of the subject of endocrinology. There are about 2000 members, and the Association publishes the Journal of Endocrinology.

The Scientific Sessions will be held in the Colonial Ballroom of the Hotel St. Francis, San Francisco, Monday, June 25, at 9:30 a. m. and at 2 p. m. There will be a Subscription Dinner in the Colonial Ballroom at 7 p. m., followed by addresses on important subjects relating to the study of endocrinology.

All medical men are invited to these meetings.

STATE SOCIETY

CODIFICATION OF CONSTITUTION AND BY-LAWS OF THE STATE MEDICAL SOCIETY

Second publication of the report of the Committee as required by the Constitution and by action of the House of Delegates.

CONSTITUTION

ARTICLE I

Name and Object

Section 1. The name of this Association is the "California Medical Association."

Sec. 2. The purposes of this Association are to promote the art and science of medicine and the betterment of public health. Contributing to this end it shall endeavor to federate and bring into one compact organization the entire medical profession of California, and to unite with similar societies of other States to form the American Medical Association and such regional associations as its House of Delegates may deem advisable; to extend medical knowledge and advance medical science; to elevate the standard of medical education and practice, and to secure the enactment and enforcement of just medical laws; to promote friendly intercourse among physicians; to guard and foster the interests of its members and to protect them against imposition; and to enlighten and direct public opinion in regard to the great problems of medicine and public health, so that the profession may become more capable and honorable within itself, and more useful to the public, in the prevention and cure of disease, and in the prolonging and adding comfort to life. This Association as a constituent unit of the American Medical Association hereby recognizes and pledges its support to the Constitution and By-Laws of the American Medical Association and rulings by competent authority thereof.

ARTICLE II

Component Societies

Component societies shall consist of those county and district societies which hold charters from this Association and whose Constitution and By-Laws, rulings, activities and procedure are not in conflict with the Constitution and By-Laws and decisions of competent authority of this Association.

ARTICLE III

Members

Section 1. Members—The members of the Association are the members of the component district, county and medical societies together with the associate members of this Association as provided in Section 2 and the affiliate members as provided in Section 3 hereof.

Sec. 2. Associate Members—Associate members shall be elected from those persons who by education, training and experience in sciences so closely allied to medicine as to make their affiliation with this Association desirable in the opinion of the Council. They shall be elected by the Council. Associate members shall pay such annual dues and enjoy such rights and privileges as the Council from time to time may prescribe.

Sec. 3. Affiliate Members—Affiliate members shall be elected from those doctors of medicine eligible for active membership, but who are, for any reason satisfactory to the county society and the Council of the State Association, entitled to special consideration. These members shall have all the rights and privileges of other members, except medical defense, and shall pay dues of one dollar a year to the county society and one dollar a year to the State Association.

Sec. 4. Persons eligible for membership and affiliate membership under the provisions of this Constitution are not eligible for any other type of membership either in any county society or in this Association. Honorary membership is limited to persons elected from those eligible to active or affiliate membership in State and county societies.

Sec. 5. Guests—Any person may become a guest during any annual meeting, on invitation extended by the Secretary with the approval of the Council or the Executive Committee. Guests shall be accorded the privilege of participating in all of the scientific work for that meeting.

ARTICLE IV

House of Delegates

The House of Delegates shall be the legislative body of the Association, and shall consist of (1) Delegates elected by the county medical societies, (2) the Councilors, and (3) ex-officio, the President, President-elect, and the Vice-President of this Association.

ARTICLE V

Meetings

Section 1. The regular meetings of this Association shall be held annually at such times and places as the Council shall fix; and notice thereof shall be published in the Journal of this Association in at least two regular issues preceding such regular meeting.

Sec. 2. Special meetings of the House of Delegates may be convened as the By-Laws provide. Twenty-five members shall constitute a quorum in the House of Delegates.

ARTICLE VI

Officers

Section 1. The officers of this Association shall be a President, a President-elect, a Vice-President, and fifteen Councilors, of whom one shall be elected from each of the nine Councilor districts and six at large, two of whom shall be elected from the County of Los Angeles, and four from the remainder of the State. Not more than three Councilors shall be elected from any one Councilor district. These officers shall be elected by the House of Delegates at the time and in the manner provided in this Constitution and By-Laws.

Sec. 2. The officers, except the Councilors, shall be elected annually. The terms of the elected Councilors shall be for three years.

Sec. 3. The Association shall elect a President for the next succeeding year who shall remain President-elect for one year preceding his assumption of the office of President. While President-elect he shall be ex-officio a member of the Council and of all other bodies and committees of which the President is an ex-officio member.

Sec. 4. No delegate during his term of service as delegate shall be eligible to any office named in Section one, except that of Councilor, and no person shall be elected to any such office who has not been a member of the Association for two years next preceding his election.

ARTICLE VII

Council

The Council shall consist of the elected Councilors and ex-officio the President, the President-elect and the Vice-President. Besides its duties mentioned in the By-Laws, it shall constitute the Finance Committee of the House of Delegates. Five Councilors shall constitute a quorum.

ARTICLE VIII

Sections and District Societies

The Council shall provide for a division of the work of the Association into appropriate sections. It shall assist in the organization of such district societies as will promote the best interests of the profession, such societies to be composed exclusively of members of county societies.

ARTICLE IX

Funds and Expenses

Funds shall be raised by equal per capita assessments upon the active members of each county society, and by such donations, voluntary subscriptions, proceeds from publications and such other earnings as are acceptable to the Council. The amount of assessments shall be fixed by the House of Delegates by a two-thirds vote thereof of those present. The fiscal year of the society shall be from January 1 to December 31. The number of members in good standing in each county society on the first day of October of each year shall be taken as the basis for the assessment for the following fiscal year.

ARTICLE X

Referendum

The House of Delegates, in regular or special session assembled, the Council, or the Association in general session, may by a two-thirds vote submit any question in such form as they may approve, to all of the members of the Association by mail, and a majority of the vote so cast by mail by the members of this Association shall bind the Association and all county societies thereof upon the question presented.

ARTICLE XI

The Seal

The Association shall have a common seal, with such inscription thereon as the Council may prescribe.

ARTICLE XII

Amendments

The House of Delegates at any annual meeting may amend any article of this Constitution by a two-thirds vote of the delegates present, provided that such amendment shall have been presented in open meeting at the previous annual meeting, and that it shall have been published twice during the year in the Journal of this Association, or sent officially to each county society at least two months before the meeting at which final action is to be taken.

BY-LAWS

CHAPTER I

Membership

Section 1. All members, affiliate, associate and honorary members of county societies, shall, by virtue of such membership, be members, affiliate, associate or honorary members of this Association upon certification by the Secretary of the county society of such membership and the receipt by the Secretary of this Association of the assessment for the fiscal year.

Sec. 2. Any person who is under sentence of suspension or expulsion from a county society, or whose name has been dropped from its roll of members, shall not be entitled to any of the rights or benefits of this Association, nor shall he be permitted to take part in any of its proceedings, nor receive its publications, until he has been relieved of such disability.

Sec. 3. It shall be the duty of the Secretary of each county society to furnish the Secretary of this Association before the first day of March of each year a list by names and addresses of all members in good standing on the first day of January of each year, and to notify the Secretary of this Association monthly of all changes in

membership of the constituent society, with corresponding change of address.

Sec. 4. Any physician residing in a county in which there is no county society may make application and be admitted to the county society most convenient to the county in which he resides, subject to the requirements of membership in said county.

CHAPTER II

Meetings

Section 1. The annual meeting of this Association shall be held at such time and place as the Council shall appoint.

Sec. 2. Special meetings of the House of Delegates may be called by the President upon request so to do by a majority vote of the Council, and shall be called by him upon the written request of at least twenty delegates, provided that all members of the House of Delegates are notified as to the time, place and object of the proposed meeting, by written notice, given at least ten days prior thereto.

Sec. 3. General Sessions, Sessions of the House of Delegates and Section Meetings, except as otherwise provided by the Constitution and these By-Laws—the time for the convening of each thereof, the number of meetings, duration and place thereof, shall be fixed by the chairman of the committee on scientific program, with the approval of the Council.

CHAPTER III

House of Delegates

Section 1. The House of Delegates shall be the legislative body of the Association, and shall consist of the officers of the Association and the regularly elected and properly certified delegates or alternates representing their several county societies.

Sec. 2. Each county society shall be entitled to send to the House of Delegates each year one delegate and one corresponding alternate for every fifty members as of the first day of October of the preceding year, and one for each major fraction thereof, provided that each county society which has made its annual report and paid its assessment, as provided in this Constitution and By-Laws, shall be entitled to at least one delegate and one alternate.

Sec. 3. Twenty-five delegates shall constitute a quorum.

Sec. 4. Delegates and alternates shall be elected for a term of two years, and those societies entitled to more than one representative shall arrange such election so that one-half of their delegates and alternates, as near as may be, shall be elected each year.

Sec. 5. The House of Delegates shall approve all memorials and resolutions of whatever character issued in the name of the Association before the same shall become effective.

Sec. 6. The sessions of the House of Delegates shall be open to all members of the Association.

Sec. 7. The House of Delegates shall have authority to appoint committees for special purposes from among members of the Association who are not members of the House of Delegates. Such committees shall report to the House of Delegates, and may be present and participate in the discussion of their reports.

Sec. 8. The House of Delegates shall elect representatives to the House of Delegates of the American Medical Association in accordance with the Constitution and By-Laws of that body.

CHAPTER IV

Duties of Officers

Section 1. The President shall preside at the meetings of the Association and of the House of Delegates; he shall appoint all committees not otherwise provided for; and perform such other duties as custom and parliamentary usage may require.

Sec. 2. The Vice-President shall assist the President in the discharge of his duties and act for him in his absence.

Sec. 3. The Secretary shall attend the general meetings of the Association; the meetings of the House of Delegates and of the Council, and shall keep the minutes of their respective proceedings. He shall be ex-officio Secretary of the Council. He shall be custodian of all records, books and papers belonging to the Association, and shall keep account of and promptly turn over to the depository all funds of the Association which come into his hands. He shall provide for the registration of the members and delegates at the annual meetings. He shall, with the co-operation of the secretaries of the county societies, keep an approved register of all the members of the Association by counties, noting on each his status in relation to his county society. He shall aid the Councilors in the organization and improvement of the county societies and in the extension of the usefulness of this Association. He shall conduct the official correspondence, notifying members of meetings, officers of their election, and committees of their appointment and duties. He shall employ such assistants as may be authorized by the Council, and shall make an annual report to the House of Delegates. He shall supply each county society with the necessary blanks for making its annual report; he shall keep an account with the county societies, charging against each society its assessment, and collect the same. He shall in like manner keep an account with each member as to any assessment or assessments levied directly upon each member, and collect the same. As chairman of the committee on scientific program, he

shall prepare and issue all programs. He shall perform such other duties as the Council may direct. He shall be appointed by and have his compensation fixed by the Council.

Sec. 4. The depository of the Association shall be a bank or trust company to be selected by the Council. All funds received for the Association by any officer or agent thereof shall be promptly paid to the Secretary and by him deposited with the depository. The depository shall pay out the money of the Association only upon a check or draft signed by the Secretary and countersigned by the chairman or other designated member of the Council. The Secretary shall issue such checks or drafts only upon vouchers approved by the Auditing Committee and signed by all the members thereof. A revolving fund in such amount as may from time to time be fixed by the Council shall be left with the Secretary, from which fund immediate cash demands may be paid.

CHAPTER V

Council

Section 1. The Council shall meet on the day preceding the annual meeting of this Association and daily during its sessions, and it shall also hold at least three other meetings during the year, at least one of which shall be held in the southern part of the State. Special meetings may be called by the chairman at any time, and he shall call a special meeting upon the written request of at least three councilors, provided written notice of the time, place and object of the proposed special meeting be given by the Secretary to all members of the Council not less than seven days prior to such meeting. At the meeting held on the last day of the annual meeting of the Association the Council shall reorganize and shall elect a chairman for the ensuing year. The chairman shall make an annual report to the House of Delegates.

Sec. 2. The Council shall have power to invest the funds of the Association, and to do and perform all acts and transact all business for and on behalf of the Association when the House of Delegates is not in session. It shall also have power to delegate such powers and duties as it may determine to the Executive Committee hereinafter provided for.

Sec. 3. In the event of a vacancy in the Council, or in any elective or other office not otherwise provided for, the Council shall fill the vacancy until the next annual election or other regular selection, as provided for in the Constitution and By-Laws.

Sec. 4. The Council shall provide for the publication and distribution of a periodical to be known as the "Journal of the California Medical Association," or some other satisfactory title to be determined by the Council, and such other publications as may be necessary, and shall have authority to engage an editor at such compensation as it may deem proper, who shall be responsible to the Council, and who shall edit and conduct the journal and other publications in a manner and under conditions satisfactory to the Council.

Sec. 5. The Council shall engage, and arrange for the compensation of, a secretary, who shall be the executive officer of the Council and of the Society.

Sec. 6. The Council shall secure the services of competent public accountants and cause them to audit the accounts of all officers, committees and agents of the Association at least once a year, and shall present a report to the House of Delegates.

Sec. 7. The Council shall divide the State into Councilor districts, according to the number of districts fixed by Article VI, Section 1, of the Constitution, specifying what counties each district shall include. Whenever the number of delegates, as provided in Chapter III, Section 2, exceeds one hundred, it shall make a reapportionment that shall bring the number of delegates within this limit. Such reapportionment shall take effect immediately following the annual meeting at which the reapportionment is approved by the House of Delegates.

Sec. 8. The Council may, upon application, issue charters to county societies organized to conform to the letter and spirit of the Constitution and By-Laws, rulings and regulations of the Association, and such county society shall not amend or change the same, contrary thereto. The Council may, upon application, issue similar charters to other societies of physicians, otherwise qualified to become members of a county society and of this Association, where by reason of geographical or other conditions county organizations are not feasible or calculated to promote the best interests of the profession or of the public. Said district county society shall in like manner be organized to conform to the letter and spirit of the Constitution and By-Laws, rulings and regulations of this Association, and such county societies shall not change or amend the same contrary thereto.

Sec. 9. The Council, when the best interest of the Association and profession will be promoted thereby, may organize district medical societies, and members of the county societies, and no others, may be members of such district societies.

Sec. 10. The Council may promote and cause to be organized societies of medical or premedical students in any approved teaching institution in this State, with such affiliation with this Association and under such control as it may deem advisable and proper.

Sec. 11. The Secretary, with the written authoriza-

tion of the chairman of the Council, may submit any urgent question to the Council by mail ballot and the result as shown by such ballot shall be binding.

Sec. 12. The chairman of the Council shall annually appoint a committee of two who shall audit the accounts of the Association at least once every month. Said Auditing Committee shall elect a chairman.

Sec. 13. The Council shall appoint an attorney-at-law in good standing, practicing his profession at San Francisco, to act as general attorney for the Association, and an attorney practicing his profession at Los Angeles to act as assistant general attorney. The general attorney shall, so far as possible, attend the sessions of the Council and of the House of Delegates and shall generally advise and counsel with the councilors and officers of the Association. The general attorney or assistant general attorney shall have charge of all actions for malpractice against individual members of the Association on behalf of such members whenever their defense is authorized by the Association, through the Council, the Executive Committee or the Secretary thereof.

Sec. 14. All questions cognizable by this Association of more than local importance whether involving interpretation of ethics, definition of policy, decision in controversy, financial, organizational or other matter not provided for by the Constitution and By-Laws which arise between annual sessions shall be referred to the Council for action, and its action shall be binding upon the Association and its component member societies, provided that the action by the Council is subject to review by the House of Delegates or by a general referendum.

Sec. 15. The Executive Committee of the Council shall consist of the President, the President-elect, the Vice-President of the Association, the chairman of the Council, the chairman of the Auditing Committee, the Secretary-Editor, and the general attorney. The committee shall elect its own chairman, and the Secretary shall act as secretary thereof. It shall keep a record of its proceedings and report them to the Council, and all of its proceedings shall be subject to the approval of the Council.

CHAPTER VI Order of Procedure

The Program Committee shall consist of the Secretary of the Association and four members of the Association who shall be elected by the House of Delegates, one each year to serve for four years. The Secretary of the Association shall be the chairman thereof. It shall determine the character and scope of the scientific proceedings of the Association, subject to the instructions of the Council, and shall provide for and fix the order of business at the sessions of the general meeting, the sessions of the House of Delegates and the sessions of each section.

CHAPTER VII County Societies

Section 1. Each county society of this Association, which has adopted principles of organization not in conflict with the Constitution and By-Laws, rulings and procedures of this Association, shall, on application, receive a charter from and become a component part of this Association. Such charters shall provide that the Constitution and By-Laws and procedures of the component member society shall not be amended in any way which might conflict with the Constitution and By-Laws of the American Medical Association and of this Association as originally drawn or as modified by competent authority, except by and with the written approval of the Council of this Association.

Sec. 2. Charters shall be issued only by the House of Delegates after approval by the Council, and shall be signed by the President and Secretary of this Association. The House of Delegates, upon recommendation of the Council, shall have authority to revoke the charter of any county society whose actions are in conflict with the letter or spirit of the Constitution and By-Laws, policies and procedures of this Association.

Sec. 3. Only one medical society shall be chartered in any one county, provided that the physicians in a portion of any one county who can show adequate reasons satisfactory to the Council therefor may be authorized to join some other county society as elsewhere provided for in this Constitution and By-Laws.

Sec. 4. Each county society shall judge the qualifications of its members. However, as such societies are integral parts of this Association and the basis of membership in the American Medical Association, it is necessary that the qualifications meet the minimum requirements of the State and National organizations. These minimum requirements are that to be eligible for election as an active or affiliate member the applicant must hold the degree of doctor of medicine from an accredited medical school for active membership and must be licensed to practice medicine and surgery in the State of California. He must not practice or claim to practice or lend his support, co-operation or in any other way endorse any exclusive system of medicine or any person practicing the same. He shall be honorable and ethical in his conduct and shall subscribe to the principles of medical ethics of the American Medical Association, and shall recognize the Council of this Association as the proper authority to interpret any doubtful points in ethics. Every applicant for membership in a county society shall fill out and sign in duplicate the application blanks provided by the Society which prescribe the neces-

sary qualifications for membership. One copy of each such application shall be promptly forwarded to the office of this Association.

Sec. 5. Any physician who may feel aggrieved by the action of the society of his county in refusing him membership, or in censuring, suspending or expelling him, shall have the right to appeal to the Council within the period of three months next succeeding the date of such action of his county society, which appeal shall be in writing and filed within the said period in the office of the Secretary of this Association. Within a period of three months after a decision by the Council thereon, any party interested may appeal to the House of Delegates, whose decision in any case shall be final. Such appeal shall, in like manner, be in writing and filed within said period of three months at the office of the Secretary of this Association.

Sec. 6. In hearing appeals, the Council shall review all questions involved and may appoint committees from its own number or any notary public to act as referee for the purpose of taking evidence upon any point or question which shall thereafter be submitted to the full membership of the Council, and it shall use any lawful means in its judgment as will best and most fairly present all the facts involved. In every case of an appeal, the Council as a board and as individual councilors, shall exert all proper efforts at conciliation and compromise prior to any hearing being held upon the appeal.

Sec. 7. When a member in good standing in a county society moves to another county or other jurisdiction in this State, his name, on request, shall be transferred, without cost, but upon assuming such financial obligation as shall be deemed proper by the county society to which he is transferred.

Sec. 8. A physician living on or near a county line may hold his membership in that county most convenient for him to attend, provided that the consent of the society of the county in which such physician may reside be first obtained, and also the consent of the society which he desires to join.

Sec. 9. The Secretary of each county society shall keep a roster of its members and of the non-affiliated registered physicians of the county, on which shall be shown the full name, address, school and date of graduation, date of license to practice in this State and such other information as may be deemed necessary. In keeping such roster the Secretary shall note and at once notify the State Secretary of any changes in the personnel of the profession, by death, by resignation, or by removal to or from the county, and in making his annual report he shall account for every physician who has lived in the county during the year. The Secretary of each county society shall make a monthly report to the Secretary of this Association upon such forms and including such subjects as the Council may authorize.

Sec. 10. The Secretary of each county society shall forward its assessments, together with its roster of officers and members, list of delegates and alternates and list of non-affiliated physicians of the county to the Secretary of this Association before the first day of March of each year. Only those delegates and alternates who are duly elected and certified to the State Secretary before March 1 may represent their society in the House of Delegates.

Sec. 11. Any county society which fails to pay its assessment or make the report required on or before March 1 shall be held as suspended, and none of its members, delegates or alternates may participate in any of the business or proceedings of the Association or of the House of Delegates during the annual session of that year, nor thereafter, until all requirements for membership have been met.

Sec. 12. No member of a county society shall be deprived of his membership unless by his own act, except by a three-fourths affirmative vote of all the regular membership in good standing of the county society to which he belongs present and voting at a regular meeting thereof, and only after at least six weeks' written notice, personally delivered to the member, has been served upon him fully stating the charges against him, and only after such member shall have been given full opportunity to be heard in his own defense at such meeting; but a member shall be dropped on the revocation of his license to practice by the duly constituted and legal authority of the State of California vested at the time with the power to revoke such license.

Sec. 13. When a member resigns his membership in a county society, he shall thereby forfeit all right and title to any share in the privileges and property of the California Medical Association.

Sec. 14. Any county society may, in its discretion, create affiliate, associate and honorary members. When the county society follows the provisions of the State Association in its affiliate, associate and honorary membership provisions, such associate, affiliate or honorary members of county societies may be elected by the Council to corresponding positions in the State Association.

CHAPTER VIII Miscellaneous

Section 1. The principles of medical ethics of the American Medical Association are adopted as the principles of medical ethics of this Association and are made part of the charter provisions for county societies. Interpretation of points in ethics about which there may be any controversy shall be submitted to the

Council of the State Association for ruling, and its ruling shall be final.

Sec. 2. New members who join a county society after July 1 shall pay only one-half the regular annual assessment for such fiscal year.

Sec. 3. The deliberations of this Association shall be governed by parliamentary usage as contained in Robert's Rules of Order, when not in conflict with this Constitution and By-Laws.

CHAPTER IX Amendment to By-Laws

Section 1. The House of Delegates may amend any chapter or section of the By-Laws by a three-fourths affirmative vote of the delegates present and voting; provided, that such amendment has been submitted in writing and laid on the table for twenty-four hours previous to being voted upon.

Sec. 2. The Constitution and By-Laws heretofore governing this Association as the Medical Society of the State of California are hereby repealed and this Constitution and By-Laws shall be in full force and effect immediately after they are declared duly adopted.

Hypertension and the Heart—Whereas the death rate from epidemic diseases in consequence of knowledge of their pathogenesis has on the whole been falling, the death rate from chronic diseases, notably cancer and heart disease, George Edmeston Fahr, Minneapolis (Journal A. M. A., April 7, 1923), points out has been rising, 124,000 persons having died of organic heart disease, exclusive of acute endocarditis and pericarditis, in 1920. Heart disease has now become the leader of the forces of death. If we are to prevent heart disease in the future, or even increase the expectancy of persons having this disease, we must increase our knowledge of the factors concerned in its production. In this paper Fahr attempts to prove that hypertension is the most important factor in the etiology of chronic heart muscle disease. No one has ever produced experimentally by inoculation with micro-organisms cardiac hypertrophy and interfascicular and intrafascicular fibrosis, the most common histologic changes in so-called chronic myocarditis. Fahr, therefore, believes that there are no good grounds for assuming that chronic infections are the most important or the primary etiologic factor in the production of chronic heart muscle disease. He examined the records of 142 cases diagnosed "myocardial insufficiency" or "hypertrophy and dilatation of the heart" and found that 109, or 75 per cent, had a systolic blood pressure record of 170 or over, and a diastolic pressure of 100 or over. About 10 per cent of these cases, came to necropsy and showed marked increase in weight of the heart, largely due to left ventricular hypertrophy. Despite the fact that many of Fahr's patients are in the earliest stages of hyperpiesis, 75 per cent of them show definitely dilated hearts on accurate roentgen-ray examination. About 30 per cent show mild or severe degrees of heart failure, as dyspnea on exertion, edema of the lower extremities, winter cough, paroxysmal attacks of cardiac asthma, enlarged liver, and angina pectoris. Not 5 per cent show marked renal insufficiency at the present time. It looks very much as if the greater majority of these patients are destined for a death from heart failure. At least 75 per cent of all hearts diagnosed "chronic myocarditis" "myocardial insufficiency" or "myocardial degeneration" show the "sabot" shaped type of heart. Fahr is convinced that at least 75 per cent of all chronic heart muscle disease unassociated with valve defect is due to hypertension. Chronic or acute infection plays a minor role in the production of heart muscle disease. Acute infection is an adverse factor in chronically weakened hearts. Approximately 50,000 persons in the United States die of hypertension heart every year.

Medical Society of Hawaii—The Medical Society of Hawaii, through its president, F. J. Pinkerton, extends a hearty greeting to medical men and an invitation for them to come to Hawaii after the A. M. A. convention, where they will be warmly welcomed.

COUNTY NEWS

CONTRA COSTA COUNTY

Contra Costa County Medical Society (reported by L. St. John Hely, secretary)—The regular monthly meeting of the Contra Costa County Medical Society was held at the home of E. B. Fitzpatrick, Martinez, on the evening of May 5, U. S. Abbott presiding in the absence from town of the president and vice-president.

U. S. Abbott, chairman of the Committee on Clinics for the American Medical Association at the meeting in San Francisco in June, discussed the various phases of the subject. Dr. Abbott also read the matter compiled by Secretary Musgrave to insert in a booklet describing the resources, population, and other matters of interest in Contra Costa County and expense thereof, this booklet to be given gratis to every member of the American Medical Association visiting the Coast in June. After discussion it was voted to subscribe \$75 of the funds of this society to that publication.

C. L. Abbott, as chairman of the committee to raise funds in the East Bay to defray expenses in entertaining the members of the A. M. A. who visit San Francisco, discussed the subject.

The paper of the evening was presented by W. A. Clark of Oakland. The Doctor chose "Prolapse of the Uterus" for his subject, and presented it in a most able manner; every phase of the subject was discussed exhaustively and illustrated with lantern slides. An original operation of the Doctor's, which has never been published, made the best impression with the members. Briefly, it is anchoring the uterus to the abdominal wall with strips of the rectus fascia.

After the meeting a supper was served by Dr. and Mrs. Fitzpatrick.

FRESNO COUNTY

Fresno County Medical Society—The Fresno County Medical Society, in co-operation with other interested agencies, is planning to engage in post-convention activities of the American Medical Association on Monday, July 2. The program consists in a special meeting of the county society, Monday morning at 10 a. m., with clinics and conferences until 1 p. m., followed by a luncheon. The afternoon will be spent in sightseeing, golf and entertainment, and the evening is to be given over to a public banquet, which will be addressed by prominent public health speakers selected from visiting delegates to the American Medical Association.

KERN COUNTY

Kern County Medical Society (reported by P. J. Cuneo, secretary)—The regular April meeting was held at the County Hospital April 19, with fifteen members present. Leo Eloesser of San Francisco gave an interesting paper on "Surgery of Tuberculosis." With the aid of lantern slides, Eloesser disclosed when surgery is most beneficial and how it is to be used in tubercular patients. M. F. Frandy of Maricopa was elected to membership.

LOS ANGELES COUNTY

Los Angeles County Medical Society—The Los Angeles County Medical Society, in co-operation with hospitals and other health agencies, has outlined a very attractive post-convention program for Monday and Tuesday, July 2 and 3, following the American Medical Association convention in San Francisco the preceding week. On both days post-convention clinics will be held in the accredited hospitals from 10 a. m. to 1 p. m. The afternoons will be given over to a variety of social programs. The evening of Monday will be devoted to a general meeting of the society and its friends, with

addresses by prominent visiting Fellows of the American Medical Association. The evening of Tuesday will be given over to dinners and various other forms of personal entertainment, all ending in the pageant to be given at Exposition Park at 8 p. m.

The staff of the Seaside Hospital at Long Beach, in co-operation with other health agencies and friends, have arranged an attractive program for Tuesday, July 3. There will be clinics and clinic conferences at the hospital during the morning; golf, sightseeing and other entertainment during the afternoon, and in the evening there will be a public banquet at the Virginia Hotel, followed by a dance.

MONTEREY COUNTY

Monterey County Medical Society (reported by T. C. Edwards, secretary)—I beg to report another red letter day in the history of Monterey County Medical Society.

We had our meeting in Monterey at El Adobe Hospital. This hospital I think is unique in as much as it is one of the old land marks. A residence, built by one of California's former "Dons", of the old adobe type, is in a splendid state of preservation and has been remodeled by Martin McAulay and converted into a serviceable hospital.

The evening was given over to Arthur L. Fisher of San Francisco who gave us a talk on "Fractures with Special Reference to Industrial Surgery." Those members of the society who failed to hear Dr. Fisher were the losers and those who did hear him were unanimous in their thanks to him for coming to us.

RIVERSIDE COUNTY

Riverside County Medical Society (reported by Thomas A. Card, secretary)—The Society met May 14 in the Library School rooms, Riverside, with twenty-five members present and fifteen guests. W. W. Roblee gave an address on "Diabetes: Insulin Treatment." Discussion was opened by Floyd Gardner of Loma Linda and E. H. Wood of Riverside, both of whom have spent considerable time in Santa Barbara with Dr. Sansum and demonstrated the technique used there.

William M. Duffield of Los Angeles discussed fully the problem connected with the Indemnity Defense Fund and medical defense and stressed certain points which should be kept in mind. He advocated the formation of a corporation for insuring the members which would give adequate protection at a minimum cost.

James Ramsay was admitted to membership by transfer from the Los Angeles County Medical Society. Richard J. Elvin of Hemet was also admitted to membership.

SACRAMENTO COUNTY

Sacramento County Society for Medical Improvement—The Sacramento County Society, in co-operation with other interested agencies, will take an active part in the Post-Convention activities of the A. M. A. on Monday, July 2. There will be a special meeting of the Society on Monday morning at ten o'clock, with clinics and conferences until one o'clock, when luncheon will be served visiting Fellows and guests. The afternoon will be spent in golf, sightseeing and various forms of entertainment, and the evening will be given over to a public banquet, with addresses by prominent public health men selected from visiting Fellows to the American Medical Association.

SAN BERNARDINO COUNTY

San Bernardino County Medical Society (reported by E. J. Eytinge, secretary)—The Society met on May 1 at the San Bernardino County Hospital, with forty members present and ten guests. The program of the evening consisted in a talk on "Bunions" by W. C. Koebig of Los Angeles, with a discussion opened by P. M. Savage; "Posture"

by A. E. Gallant of Los Angeles, discussion opened by J. A. Schreck; and "Demonstration of Corrective Postural Measures" by Mrs. Z. V. Glimm. The entire program was illustrated by lantern slides.

Fred B. Moor of Loma Linda was elected to membership in the society.

The following resolution was passed: "It shall be the sense of the Council that Abrams' method of diagnosis is a fraud. Any physician practicing this method is ineligible to membership. If a member, he shall immediately cease this method of practice or charges of unethical conduct shall be preferred against him."

SAN DIEGO COUNTY

San Diego County Medical Society (reported by Robert Pollock)—Recent papers presented before the San Diego County Medical Society were "The Requirements of the Modern Abdominal Surgeon," Thomas O. Burger, "A Case of Ectopic Pregnancy at Term with Living Child," B. J. O'Neill, "Hemorrhagic Labyrinthitis," D. R. Higbee, "Silent Renal Calculi," E. F. Chamberlain, "Calculi of Urethra and Bladder," Case Report, H. G. Lazelle, "Medical Mistakes," Robert Bruce Preble, Chicago.

Dr. Preble's paper was one of such unusual qualities that we feel justified in outlining it here. Medical mistakes, as the speaker saw them, were (1) errors due to ignorance, (2) errors due to faulty or insufficient data, the result of poor history taking or faulty physical examination, (3) family errors of thought. The speaker divided this group into (a) cases where we forget that diagnosis is a purely intellectual exercise and must not be warped by an unwillingness to recognize the facts before us or by personal sympathies and desires, (b) where we disregard the law of averages with a universal tendency to think of the unusual and forget the most common condition which would explain the picture, (c) Where we overlook the fact that the diagnosis should explain all the physical findings and the history, and where any discrepancy speaks for a wrong diagnosis, (d) Where we permit a feeling of resentment of healthy criticism to compromise our better judgment. In this connection the doctor expresses a very happy definition when he says an optimist is one who believes anything you tell him providing it is pleasant and who thinks that he can get rid of a disagreeable thought by denying it.

On the evening of April 28, Francis M. Pottenger of Monrovia addressed a medical audience at the Naval Hospital, Balboa Park, on "The Present Status of the Diagnosis and Treatment of Tuberculosis." About fifty members of the County Medical Society enjoyed this meeting on the invitation of Captain F. W. F. Wieber, Commandant, Naval Hospital. Dr. Pottenger handled his subject in the masterly way in which he can always be counted upon to discuss phases of his specialty.

The meeting was heartily enjoyed by those present and was followed by a social hour with refreshments in accordance with the habitual courtesy of the naval staff.

As an expression of the growth of the San Diego County Medical Society it was called upon at its last meeting to appoint an additional delegate and alternate to the state society meeting to be held in San Francisco in June. The following selections were made, A. J. Thornton, delegate, Emil C. Black, alternate.

The San Diego County General Hospital has added recently a social service worker to the growing personnel of its executive force. An excellent clinical program was presented at the county hospital on the evening of May 8 by members of the staff. J. F. Grant presented a group of trachoma cases in various stages of the disease, with the purpose of showing the progressive and destructive nature of this rather common disease of the eye. Dr. Harding presented two cases of

obliterating endarteritis with gangrene of the toes which were being treated with potassium aluminum nitrate (alkanite) 2 per cent in sterile oat meal with remarkably good success. Dr. Blondin reported an interesting group of diabetics recently treated in the hospital showing satisfactory results in the different manipulations of the food elements. Wicherski presented for Drs. Fox and Rees a case of carcinoma of the cheek which had been removed with the actual cautery and upon which plastic work had been begun to rebuild the face.

The San Diego County Medical Society is taking a very active part in Post-Convention activities of the American Medical Association. Clinics will be held in the County General Hospital, representing also St. Joseph's Hospital, on Monday during the morning. Luncheon will be served, at which the visiting Fellows will be guests. The afternoon will be taken up with sightseeing trips and golf, with appropriate entertainment for women visitors, and there will be a banquet of the County Society in the evening. On the following day, Tuesday, July 3, the program is in the hands of the staff and committee of the United States Naval Hospital. During the morning a modern temporary hospital will be constructed in Balboa Park in front of the Naval Hospital; an airplane ambulance will arrive from the fleet, with surgeons and wounded aboard, landing them at the temporary hospital and showing the emergency service of the Navy. At one o'clock a buffet luncheon will be served, and the afternoon will be given over to a series of clinics by the staff of the hospital upon tropical medicine. The hospital is well supplied with patients of perhaps the largest variety of tropical diseases ever brought together in one place in the United States.

Imperial and other close-by county societies will co-operate with the San Diego Society and assist in making their program interesting and profitable.

SAN FRANCISCO COUNTY

San Francisco County Medical Society (reported by J. H. Woolsey, secretary)—During the month of April, the Committee on Medicine presented a program consisting of "The thyro-pituitary hypofunctional syndrome," by Nelson W. Janney, Los Angeles, and the "Incidence of goitre in young women," by F. H. Kruse.

At the general meeting the program included "Nervous children," by R. H. Kuhns; "The medical treatment of gastric and duodenal ulcer," by P. K. Brown and "Surgical aspects and treatment of gastric and duodenal ulcer," by W. B. Coffey.

The Committee on Industrial Medicine program included "Fracture-dislocations of the carpal bones," by E. B. Towne and "Presentation of industrial accident cases," by Alfred Roncovieri.

The Committee on Eye, Ear, Nose and Throat held a clinical meeting at Stanford University Hospital.

The previous meeting (reported by Frederick C. Cordes, Secretary) of this section was devoted to clinical demonstrations at the University of California Hospital.

F. C. Cordes presented a case of pulsating exophthalmos together with the case history of a similar case seen two months previously. The patient, a man of 63, while intoxicated was struck by an automobile. He was in a hospital for several days in a dazed condition. Approximately one week after the accident, the left eye became prominent and he heard constantly the sound of escaping steam, as though an engine were starting. The condition gradually became more marked and in addition he developed a diplopia. When seen he had a marked exophthalmos with pulsation, a slight ptosis and a partial paresis of the external rectus muscle. The conjunctiva was chemotic with dilated veins that on close observation were seen to pulsate. The fundus showed dilated veins with pulsation. A loud bruit was heard over the eye and

the side of the head. X-Ray examination, general examination negative. Preparatory to ligation of the internal carotid, digital compression has been used over a period of one month. The length of time during which this is tolerated without symptoms has been brought up to half an hour. At the end of this time there develops a paresthesia of the fingers of the right hand.

In the second case the finding and history were almost identical with the first case. It followed an automobile accident and the left eye was involved. The patient was a man of 23. The X-ray examination showed a fracture of the skull extending through the orbit. The perimetric field showed a large defect which cut in to include the macular region. Digital compression over a long time relieved the symptoms, but upon return to physical work, they returned so that ligation of the internal carotid will probably be necessary.

In the discussion, O. Barkan pointed out that the field in the second case corresponded to those he had observed in a series of cases with fractures of the skull running through the canal. R. S. Irvine told of an autopsy in a case of instant death from a blow of a rapidly revolving spool of wire, in which there was marked exophthalmos with but slight apparent injury. He suggested the possibility of an arterio-venous aneurysm as a cause of the exophthalmos. H. Barkan described a case of pulsating exophthalmos in which the signs and symptoms developed three months after the accident, and emphasized the importance of this in dealing with industrial medicine. In the case mentioned ligation of the internal carotid relieved the symptoms.

Charles Maghy presented a series of fundus cases including two cases of primary optic atrophy, two of secondary optic atrophy, one case of detachment of the retina due to an intraocular foreign body and another case of retinal detachment due to an inflammatory process.

In addition, he presented a woman of forty-eight years, who was first seen on February 4, 1923, with the history of lime burn one year previously following which the eye had been painful for a few days. Two weeks later she struck this same eye with a stick and the eye was again inflamed for a short time. Following this she had no trouble up to shortly before reporting to the clinic. At that time the left eye showed a symblepharon at the inner canthus. Vision O² normal. Fundi negative. Two months later she reported with an inflamed left eye with ciliary injection. There was an overgrowth of conjunctiva at the limbus, nasally, above and below with vessels crossing onto the cornea. There was a gray opaque rim in the cornea apparently continuous with the bulbar conjunctiva. On May 20, 1922, the following was noted: "Growth on cornea will not allow probe tip beneath it. It has somewhat the appearance of old trachoma with pannus. A peritomy was performed. All the usual medication and radium have been of no avail. At present there is an ankyloblepharon on each side together with a membrane that covers the cornea, except at its center and small upper portion. It has the appearance of proliferated conjunctivae epithelium. The vision is reduced to O.2. Maghy in presenting the case said that no definite diagnosis had been made and that he felt the history of a lime burn was merely incidental.

In discussing the case, H. Barkan felt that herpes iris (a type of erythema multififorma) had to be considered, but due to the lack of involvement of mucous membranes elsewhere, the absence of the other finding, it could not definitely be diagnosed as such. The other possibility that occurred to him was a typical pemphigus. O. Barkan remarked that in his opinion, the lime burn was of no significance as symptoms did not develop until about one year later. He did not feel that the condition was due to trachoma.

Wallace B. Smith demonstrated von Struycken's instrument for direct laryngoscopy on a patient suffering from laryngeal carcinoma in its early stages. This instrument is only designed for the larynx and upper part of the trachea, the sinus pyriformis, and entrance of the esophagus, and does not take the place of a bronchoscope. It is so made that the patient's upper teeth rest on a plate and the pressure exerted on the root of the tongue is thereby equalized and the gagging reflex diminished. The instrument once in place is steady and is held without fatiguing the arm of the operator, as would occur with direct laryngoscopy with a Breuninger or Jackson instrument. With the patient in the correct position, a full direct view of the larynx and upper part of the esophagus is easily obtained. The removal of polyps from vocal cords and of portions of tumors for pathological diagnosis can be done under direct vision.

In the case demonstrated, patient was suffering from carcinoma involving the right vocal cord, sinus of Morgagni, and part of the false cord. The growth had already involved the arytenoid joint immobilizing that side of the larynx.

E. C. Sewall in the discussion, pointed out the case with which a case could be demonstrated. H. Fletcher remarked at the ease with which the patient was able to retain the instrument. He suggested its use in the treatment of tubercular laryngitis by direct sunlight. C. Welty questioned the advantage of the instrument over the usual mirror and did not believe it offered advantages over other methods in the removal of a portion of a growth for pathological examination.

Smith, in closing, brought out the point that many conditions could be treated with greater facility with this instrument. This applies especially to lesions below the cords. An examination of the opening of the esophagus could not be done as well with a mirror. Its value in demonstration is also of considerable importance. The meeting was followed by a smoker in the Faculty Club rooms.

St. Joseph's Hospital Accredited by American Medical Association—Upon the recommendation of the California committee of the Council on Medical Education and Hospitals of the A. M. A., St. Joseph's Hospital of San Francisco has been accredited by that body for intern training. The hospital received its notification of accredited standing in the following letter from the Council, dated February 24, 1923, but through oversight the notice was not published in the Journal at that time:

"The persistent efforts which you have made, and the energy which you have used, are appreciated by the Council, which is glad to extend to your hospital now the approval as a hospital for giving the fifth year in medicine. Please be assured of the continued interest of the Council, and I am sure you also have the sympathy and interest of the Council's representative, Dr. Musgrave, and his committee. Notice of the approval of your hospital will appear shortly in the Journal, and in case you should at any time announce a vacancy for an intern through the columns of the Journal, a star will be used to indicate that the hospital is approved."

Southern Pacific General Hospital Accredited by the American Medical Association—Upon the recommendation of the California Committee, the Council on Medical Education and Hospitals of the American Medical Association has placed the Southern Pacific General Hospital on the list of hospitals approved for the training of interns, the hospital having been notified of this action by the following letter to F. K. Ainsworth, Chief Surgeon of the Hospital Department of the Southern Pacific Company:

"You doubtless have already heard, through correspondence with Dr. Musgrave, that your application for approval by the Council has been con-

sidered favorably, and while it is a fact that the work is probably heavy for the number of interns, the Council is glad to recognize your hospital as a suitable one for the training of interns. Along with this recognition goes the best wishes of the Council for your continued success in the care of patients, as well as the important work of training interns. A notice of this recognition will be published in an early issue of the Journal."

SAN JOAQUIN COUNTY

San Joaquin County Medical Society—This Society will take an active part in the Post-Convention program of the American Medical Association on Monday, July 2. There will be a special meeting of the Society at ten o'clock that morning, with clinics and conferences until one o'clock, when luncheon will be served to visiting Fellows and guests. The afternoon will be spent in various forms of entertainment, including sightseeing trips, golf and appropriate entertainment for women visitors. In the evening there will be a public banquet at which prominent public health speakers will be present.

SANTA BARBARA COUNTY

Santa Barbara County Medical Society (reported by Alexander C. Soper, secretary)—A regular meeting was held April 9 at the Cottage Hospital, the secretary presiding in the absence of other officers. Present eight members, two interns, and the nurses of the hospital off duty.

William J. Mellinger, showed two operative cases,—(1) man forty-four years old with congenital cleft palate and hare-lip; the palate was operated in February and the lip two weeks ago; patient was present, and photographs and a cast showed the excellent results. (2) man forty-nine years old, suffering from chronic mastoiditis since November last, operated on three weeks ago; scar now healed and results satisfactory.

W. D. Sansum read a paper on "Treatment of Diabetes with Insulin," with a resume of thirteen cases now undergoing treatment, and discussion of about eighty more formerly under treatment. Paper discussed by Freidell, Cunnane, and Profant.

Correspondence read, with the A. M. A. Convention committee, etc.

The May meeting was held Monday, May 14, at the Cottage Hospital, with President Means in the chair.

Lafayette B. Mendel, Ph. D., Sc. D., Professor of Physiological Chemistry, Yale Univ., gave a two hour talk on "The Vitamines," illustrated with lantern slides. The talk was much appreciated by the physicians, dentists, and nurses present.

SONOMA COUNTY

Sonoma County Medical Society—The Sonoma County Medical Society is planning an interesting Post-Convention program for visiting Fellows and its own members. There will be a special meeting of the Society in the morning at Santa Rosa, with clinics and conferences until one o'clock, when luncheon will be served. The afternoon will be devoted to drives through the county, showing its many points of interest, and in the evening there will be a public banquet which will be addressed by prominent public health speakers selected from visiting Fellows of the American Medical Association.

STANISLAUS COUNTY

Stanislaus County Medical Society (reported by R. E. Maxwell, secretary)—The Society met April 6 at Hotel Modesto, at dinner. The following members were present: C. E. Pearson, N. G. Chipman, J. W. Morgan, J. L. Hennemuth, C. E. Finney, F. R. McKibbin, B. F. Surrhine, E. R. McPheters, Walter Smith, J. C. Robertson, E. F. Reamer, F. J. Peter, E. F. Hagedorn, M. Bulpitt,

R. E. Maxwell and Doctor Julien. J. K. Morris was the guest of the society.

Alanson Weeks of San Francisco addressed the society with a talk on "Lung Surgery and its Practical Application." H. C. Warren of San Francisco read a paper on "Pulmonary Lesions." Both papers were highly appreciated by the members present.

On April 13 a special meeting was called at Hotel Modesto, F. R. DeLappe acting as president. E. F. Reamer was appointed delegate to the State Medical Society meeting in San Francisco and John Cooper alternate. N. Genevieve Chipman, Philip R. Fulton and R. Stewart Hiatt were elected to membership in the society. A transfer was granted C. R. Fancher to the Alameda County Society.

C. J. Durand of Colfax addressed the society on "Artificial Pneumothorax, its Indication and Results." Dr. Durand was tendered a vote of thanks for his excellent paper.

TULARE COUNTY

Tulare County Medical Society (reported by Elmo R. Zumwalt, secretary)—The society met Saturday evening, May 5 at Hotel Tulare, Tulare. Following dinner the meeting was called to order by President A. W. Preston with eight members present.

The speaker of the evening was Lloyd Hardgrave of San Francisco who gave a most profitable discussion on "The Sick Child as to examination, diagnosis and therapy." A very lively discussion ensued that lasted till a late hour.

It was mentioned that the "Certified Dairy" of the Toteco stock and fruit ranch was now in operation and that certified milk would be delivered to a depot in any town in Tulare county. This dairy is located three miles north of Tulare and invites the inspection of the profession and public at any time.

VENTURA COUNTY

Ventura County Medical Society (reported by T. E. Cunnane, secretary)—The Society met on May 14 at Oxnard and reorganized, the following officers being elected: President, R. W. Homer, Ventura; Vice-President, W. J. Lewis, Ventura; Secretary, T. E. Cunnane, Ventura. F. E. Blaisdell was elected delegate to the State Society meeting and B. E. Merrill alternate.

YOLO COUNTY

Yolo County Medical Society (reported by Lela J. Beebe, secretary)—The usual quarterly meeting was held in March with the Northern District Society. A special meeting was called May first at the County Court House, Woodland. The following members were present: Lawhead, F. R. Fairchild, C. H. Fairchild, Lawson, Keith, McManus, Newton, Ward, Beebe. L. P. Bell was present as the guest of the society. The program was brief owing to the fact that there was considerable business to transact, and consisted of one paper—"The Bite of the Latrodectus Mactans—(black spider)". The paper was followed by an interesting general discussion of cases, about twenty-four having been recorded in this locality in the past few years. The following officers were elected for 1923: President, H. D. Lawhead, Woodland; Vice-President, Charles Keith, Willows; Secretary, Lela J. Beebe, Woodland. Board of Censors, Lela J. Beebe, F. R. Fairchild, M. W. Ward.

Delegate to State Meeting: W. E. Bates; alternate M. W. Ward.

Woodland Clinic—The Woodland Clinic has been organized with the following personnel: H. D. Lawhead, W. J. Blevins, F. R. Fairchild, executive, C. H. Fairchild, Lela J. Beebe, J. D. Lawson, L. P. Bell. This clinic is housed in a building recently

erected for this purpose in Woodland, adjoining the Woodland Sanitarium.

County Health Service—The County Health Service has, during the months of March, April, and May arranged a series of Health Conferences for infants and pre-school children in various parts of Yolo County, making it possible for all children under school age to have a physical examination by a physician, with recommendations regarding correction of defects during the summer. Such groups are being held in Zamora, Broderick, Bryte, Madison, Guenda, Winters, Willow Oak Park, Davis, Grafton, and Clarksburg.

County Hospitality Committees—Every county in the State has its Hospitality Committee, whose chairman is a member of the Central Committee on Arrangements of the American Medical Association Convention, which is the guest of the California Medical Association. This committee was published on pages 223 and 224 of the May number of this Journal. Representatives from these committees will be present in San Francisco during the convention to offer post-convention hospitality to visiting Fellows and to help them arrange their itineraries, and all members of these committees will be glad to assist any visiting Fellows who may be hunting, fishing, or traveling in their counties.

Our Ku Klux Psychology—Behind our prohibitory and censorious efforts is a psychology which has to do with the will to regulate other people's lives. It is this psychology which needs to be understood above all things else. We are "in" for many manifestations of regulatory dictation regarding what we shall wear, what we shall eat, how we shall amuse ourselves, how we shall be medically treated, etc. The stamp of uniformity is, if possible, to be placed upon us by the haters of individualism, and our bureaucracies, at the behest of powerful blocs obsessed by the Puritan complex, will attempt to erect "verboten" signs everywhere. . . .

We have seen what can be done to the physician's right to use his knowledge and trained judgment in the treatment of disease, as far as alcohol is concerned. There is no reason why our reformers should limit their endeavors to this particular agent, since medicine is a field presenting unlimited targets for the play of the psychology which lies behind all their efforts.

Candy, cosmetics, beards, religious beliefs, literature, art, economic principles, political faiths, clerical collars, high heels, racial peculiarities, tobacco, tea, coffee, gold teeth and the pharmacopeia all offer tempting objects of attack to the folk once limited to card playing, dancing and theater going. In less than a decade our purifiers have enormously enlarged their sphere of action, and the things we have cited await their zealous attention.

Medicine is perhaps the most tempting field of all—not because of any moral phases, dearest of all to our Puritans—but by reason of the deadly weakness which the profession has revealed in respect to the assertion of its right to use alcohol as it sees fit in the treatment of disease.

It was said of the original Puritans that they objected to bear-baiting, not because it gave pain to the bear but pleasure to the spectators. It is because alcohol comforts certain types of patients that it is taboo. What right have these patients to be peculiar? This is Ku Klux reasoning—what right has anyone to be a Catholic, to have a Semitic nose, or to possess a black skin?

Why limit the term Ku Klux to a particular group when the psychology in question is the motive force behind all our manifestations of the will to regulate other people's lives? The Ku Kluxers wear masks and hoods, but the perpetrators of prohibition veil their true psychology, which is actually what we have explained it to be. Brothers all! under their skins.—Editorial, The Medical Times, March, 1923.

Nevada State Medical Association

HORACE J. BROWN, M.D., Secretary Nevada State Medical Association, Associate Editor for Nevada

Nevada Medical Bulletin, May 15, 1923—The time for the meeting of the A. M. A. is drawing near, and the secretary would like to have the names of our members that expect to attend; also the name of the hotel at which you will stop. The meeting will be held June 25-29. Our members should make a special effort to go, as it is not often that we have the opportunity to attend such a meeting for so little expense. The California Society is working hard to get ready for the crowd, and assures us that everything possible will be done to help us have a good time. Nevada should have a "Headquarters" and we hope to be able to arrange for one, so that we can have a place to receive and entertain our Eastern (and Western) friends. Our own meeting time is not so far off, and will be upon us before we know it, which reminds us that the program is a long, long ways from being complete. We would like to have at least twelve Nevada essayists this year, and we know that our members can deliver the goods. From present indications, we predict that the attendance will be larger than last year, when there were sixty-four physicians registered, besides a number of nurses and other visitors. We did not have enough badges to go around, so we will buy one hundred this year and hope none will be left over. If you are still in the notion of stepping into the limelight with that paper you have been wanting to read, please let the secretary know about it right away, as he is anxious to get the program complete as soon as possible. Please don't wait until the last minute, as it may then be too late to find a place for you.

In accordance with a much neglected by-law, each essayist will be required to deposit his paper with the secretary, so that it can be offered to our official journal (the California State Journal) for publication. Papers will be limited to twenty minutes and discussions to five; no one being allowed to talk twice on the same subject without unanimous consent. If these rules are observed there will be no need of the last-minute rush that we have been so accustomed to, and we will be able to attend to all of our business in a quite, orderly manner.

Don't forget about the big barbecue picnic on the last day. All you need to gain admittance is a hearty appetite and a 1923 membership card. If you haven't the latter, the former will avail you nothing except uneasiness. We still have a few of the blue and white membership cards and will be glad to send one to any member that has a guilty conscience, in exchange for his autograph on a certain kind of bank stationery.

UTAH MEDICAL ASSOCIATION

The twenty-ninth annual meeting of the Association will be held in Salt Lake City, June 20 to 22. An excellent program, including papers by both local and visiting physicians, has been provided.

Clinics will be held in the hospitals of the city, and the social program looks very tempting.

The scientific program includes the following topics and speakers:

"Management of Fractures at Base of Skull." H. H. Kerr, Washington, D. C.

"Endocarditis." Emanuel Libman, New York.

"Harelip and Cleft Palate." V. P. Blair, St. Louis.

"Pericardial Pain." Emanuel Libman, New York.

"The Treatment of Gastric Duodenal Ulcer." Carl Beck, Chicago.

"Osteomyelitis." A. J. Ochsner, Chicago.

"Plastic Surgery of Hands and Fingers." Carl Beck, Chicago.

"Problems in Kidney and Ureteral Surgery." Herman L. Kretschmer, Chicago.

"Changing Views in Eczema." William A. Pusey, Chicago.

"Protein Phases of Cutaneous Syphilis." Grover W. Wende, Buffalo.

"The Medical Practitioner and the American Society for the Control of Cancer." J. E. Rush, New York.

"Big Repairs after Cancer Operations."—V. P. Blair, St. Louis.

"Cancer Infection." A. J. Ochsner, Chicago.

The officers of the Association are J. C. Landenberger, Salt Lake City, president; J. R. Morrell, Ogden, first vice-president; George F. Roberts, Salt Lake City, second vice-president; Joseph Hughes, Spanish Fork, third vice-president; William L. Rich, Salt Lake City, secretary; F. L. Peterson, Salt Lake City, treasurer; G. L. Rees, Smithfield, R. R. Hampton, Salt Lake City, and E. G. Hughes, Provo, councilors.

Salt Lake Entertainment—The Salt Lake County Medical Society is arranging for the entertainment at Salt Lake City, Utah, of visitors who may be able to stop over en route either going to or coming from the A. M. A. convention at San Francisco. The society has appointed committees to greet and assist in making arrangements to see the city and, if possible, some of the surrounding territory, which may include wonderful mountain drives, a visit to Saltair, which is situated on Great Salt Lake, and a visit to the great copper mines in that vicinity.

Large parties intending to make this stopover are requested to give notice to the society as far in advance as possible, as to the number in party and length of time of stopover. Inquiries relative to this matter should be directed to Secretary Dr. Floyd F. Hatch, Deseret Bank Building, Salt Lake City, Utah.

Calling the Doctors In—It has long been the custom in so-called "practical" affairs, to have official information on special subjects furnished by experts. The recent health conference held by Governor Smith, at Albany, is the first instance where a similar theory has been applied by the State to medical matters. Legislation on medical subjects, in the past, has been notoriously inept, for the reason that neither the legislative nor the executive branch of the government has troubled to inform itself of the views held by the physicians, the logical mentors in subjects pertaining to public health.

When the Governor of New York announced his intention of convoking representatives of the medical profession to discuss the pressing health questions of the hour, many doubts were expressed as to their ability to arrive at a practical and far-sighted solution of the subjects under discussion. The more cynical did not hesitate to impugn the altruism of a group of men who might so readily be considered interested parties.

What Is a School?—In the seventh annual report of the Carnegie Foundation for the Advancement of Teaching, President Henry S. Pritchett discusses, among many things, the rising cost of education. He thinks much of this rising cost is due to "mistaken views of education." The report intimates that if the demands of the schools continue to increase at the present rate, society will soon be unable to bear the cost. Hence, the public school will be endangered unless its cost is brought within limits that the public can bear, and unless it fulfills the primary objects for which it exists. Dr. Pritchett suggests that this rising cost is partly justified, because some of it is due to the increase in the number of pupils, the betterment of school facilities, and the increase in teachers' salaries. But some of it is due to the fact that the school has lost its way and is now taking on a great variety of activities that not only do not accomplish their own avowed purposes, but actually defeat the original and primary purposes of the school.—The Survey, March 15, 1923.

BOOK REVIEWS

A Manual of Gynecology. By John Osborn Polak. 2nd ed. thoroughly revised. 396 pp. Illustrated. Philadelphia and New York; Lea Febiger. 1922. Price \$4.50.

The second edition of this publication has just appeared. It has been brought up to date. While the manual is very concise, one can not help but feel that at times its purpose has been overstepped and a textbook has been approached.

For quick reference this book is invaluable for the general practitioner. It is not a book for students unless used in conjunction with a textbook. For a busy practitioner this little book will form an asset to the office desk library.

The illustrations are excellent, the text is clear, and well organized, and the language is easily readable. L. A. E.

A Textbook of Gynecology. By Jas. Young. 334 pp. Illustrated. New York: The Macmillan Company. 1921. Price \$2.75.

This small book of 334 pages is written primarily for students. Covering, as it does, so many phases of the subject within a restricted space, many of the topics are necessarily very briefly considered; nevertheless, many of the more important aspects of the subject are adequately dealt with from the student's point of view, emphasis having been made particularly upon physiology and pathology.

The work is profusely illustrated with good drawings, and the general make-up of the book is good. A. J. L.

Diseases of the Ear, Nose, and Throat. By Wendell C. Phillips, M. D. 6th ed., 881 pages. Illustrated. Philadelphia: F. A. Davis Company. 1922. Price \$8.00.

The sixth edition of this book is a distinct improvement on the former editions of this excellent work. The deletion of obsolete operations removes one source of confusion to the student, to whose use the book is dedicated. The chapters on suspension laryngoscopy and bronchoscopy have been brought up to date. Of especial excellence is the section on the influence of general diseases upon the ear, nose, and throat. Altogether, it is the most satisfactory and complete textbook for students and general practitioners. H. McN.

Textbook of Anatomy and Physiology. For training schools and other educational institutions. By Elizabeth R. Bundy. Fifth edition revised and enlarged by Martha Tracy, and Grace Watson. 442 pages. Illustrated. Philadelphia: P. Blakiston Son & Co. 1923. \$2.50.

This is a good book covering what is necessary for a nurse to know about the various systems and organs of the body. The scheme of discussing anatomy and physiology side by side makes the book compact and yet fairly comprehensive. It is illustrated with clear diagrams. L. E.

Legal Medicine and Toxicology. By many specialists. Edited by Frederick Peterson, M. D., Walter Haines, M. D., and Ralph W. Webster, M. D. Second edition. Philadelphia and London: W. B. Saunders Company. 1923. Cloth, \$20 net.

The second edition of this much-used and authoritative work of Peterson, Haines and Webster will be welcomed by every physician and other person interested in legal medicine. The second edition maintains the high standard set by the first;

the revision is well and carefully done, the press work is good, and it is a pleasure to recommend the book. W. E. M.

Diseases of the Rectum, Anus, and Colon. By Samuel Goodwin Gant, M. D. In three volumes, including the ileocolic angle, appendix, colon, sigmoid flexure, rectum, anus, buttocks, and sacrococcygeal region, and containing 1128 illustrations. Philadelphia and London: W. B. Saunders Company.

Dr. Gant has rendered modern medicine a service in embodying his mature experience in a three-volume discussion of diseases of the rectum and colon. Painsstaking, careful study, with that wise discrimination only possible to the master of a subject, stand out prominently in these books. W. E. M.

BOOKS RECEIVED

Non-Surgical Drainage of the Gall Tract. A treatise concerned with the diagnosis and treatment of certain diseases of the biliary and allied systems in their relation to gastro-enterology and general clinical medicine. By B. B. Vincent Lyon, M. D., chief of clinic, gastro-intestinal department of the Jefferson Hospital; associate in medicine in Jefferson Medical College. Illustrated with 175 engravings and ten colored plates. Lea & Febiger, Philadelphia and New York. 1923.

Practical Local Anesthesia and Its Surgical Technique. By Robert Emmett Farr, M. D., Minneapolis. Illustrated with 219 engravings and 16 plates. Lea & Febiger, Philadelphia and New York. 1923.

Diseases of the Nervous System. A text-book of neurology and psychiatry. By Smith Ely Jelliffe, M. D., formerly professor of psychiatry, Fordham University, New York, and formerly adjunct professor of diseases of the mind and nervous system, New York Post-Graduate Medical School and Hospital, and William A. White, M. D., superintendent of St. Elizabeth's Hospital, Washington, D. C.; professor of nervous and mental diseases, George Washington University, and lecturer on psychiatry, U. S. Army and U. S. Navy Medical Schools. Fourth edition, revised, rewritten, and enlarged. Illustrated with 475 engravings and thirteen plates. Lea & Febiger, Philadelphia and New York. 1923.

Transactions of the American Proctologic Society, Twenty-Third Annual Session, held at St. Louis, May 22 and 23, 1922. New York: Paul B. Hoeber. 1923.

Environment and Resistance in Tuberculosis. A presentation of the nature of environment and resistance and their relation to the pathology, diagnosis, symptoms, and treatment of tuberculosis. By Allen K. Krause, M. D., associate professor in medicine, Johns Hopkins University. Baltimore: Williams & Wilkins Company. 1923.

Nursery Guide for Mothers and Nurses. By Louis W. Sauer, M. D., senior attending pediatrician, Evanston Hospital; formerly attending physician Chicago Infant Welfare, and assistant attending physician Children's Memorial Hospital, Chicago. Illustrated. St. Louis: C. V. Mosby Company. 1923.

Legal Medicine and Toxicology. By many specialists. Edited by Frederick Peterson, M. D., manager Craig Colony for Epileptics; Walter S. Haines, M. D., late professor of chemistry; materia medica and toxicology, Rush Medical College; and Ralph W. Webster, M. D., assistant professor of

medical jurisprudence, Rush Medical College. Second edition. Two octavo volumes, totaling 2268 pages, with 334 illustrations, including ten insets in colors. Philadelphia and London: W. B. Saunders Company. 1923. Cloth, \$20 net.

Rules for Recovery from Pulmonary Tuberculosis. A layman's handbook of treatment. By Lawson Brown, M.D. Fourth edition, thoroughly revised. Lea & Febiger, Philadelphia and New York. 1923.

Diseases of the Rectum, Anus, and Colon. By Samuel Goodwin Gant, M.D., New York City, professor and chief of the department for diseases of the colon, rectum, and anus at the Broad Street Hospital Graduate School of Medicine. In three volumes, including the ileocolic angle, appendix, colon, sigmoid flexure, rectum, anus, buttocks, and sacrococcygeal region, and containing 1128 illustrations and ten insets in colors. Philadelphia and London: W. B. Saunders Company.

Clinical Medicine, Tuesday Clinics at the Johns Hopkins Hospital. By Lewellys F. Barker, M.D., professor of medicine, emeritus, Johns Hopkins University; visiting physician to Johns Hopkins Hospital. Octavo of 617 pages, illustrated. Philadelphia and London: W. B. Saunders Company. 1922. Cloth, \$7 net.

Regional Anesthesia: Its Technic and Clinical Application. By Gaston Labat, M.D., lecturer on Regional Anesthesia at the New York University; laureate of the faculty of sciences, University of Montpellier; laureate of the faculty of medicine, University of Paris; formerly special lecturer on Regional Anesthesia; The Mayo Foundation, University of Minnesota. With a foreword by William J. Mayo, M.D. Octavo of 496 pages with 315 original illustrations. Philadelphia and London: W. B. Saunders Company. 1922. Cloth, \$7 net.

Bronchoscopy and Esophagoscopy. By Chevalier Jackson, M.D., professor of laryngology, Jefferson Medical College, professor of bronchoscopy and esophagoscopy, graduate School of Medicine, University of Pennsylvania. Octavo of 346 pages with 114 illustrations and four color plates. Philadelphia and London: W. B. Saunders Company. 1922. Cloth, \$5.50 net.

MEDICAL ECONOMICS

Why not let our advertisers help you?

The Advertising Friends of the Journal Are Spreading Over Larger Territory—With the last few issues of the Journal there has been a considerable increase in the advertisers from Los Angeles and the southern part of the State, and even from Nevada. We are glad to be able to offer this home service to our members and other readers.

Surgical and Hospital Gowns and Uniforms—The Nurses' and Students' Outfitting Company, 1031 West Seventh street, Los Angeles, announce service to physicians and hospitals in the manufacture of all sorts of professional garments. This is a constantly growing industry, and we are pleased to add this company from Southern California to the name of the Doctors' and Nurses' Outfitting Company, 970 Sutter street, San Francisco, whom we have carried for some time. This latter company also has stores in Oakland and Fresno.

Rehabilitation Fellowships—The Stanford Medical School announces in this number an offer of a certain number of Fellowships in Rehabilitation work. Physicians who include industrial medicine and surgery in their practice, and those who desire to be-

come familiar with the technique of this work, are invited to read the announcement.

Rickenbacker Motor Company has an advertisement in this number of the Rickenbacker Automobile. This is the first automobile to be advertised in our Journal, although automobile advertising is featured occasionally in other medical journals. Mr. Charles W. Kohl, manager of the San Francisco office of the Motor Company, has had much contact with physicians and is pleased to announce that he has sold a considerable number of Rickenbacker cars to members of the profession in this State.

Foolproof Electric Pad—The Reno Optical Company, Reno, Nevada, is advertising a substitute for the hot water bottle. This article has been in use for some time and carries the endorsement of a number of hospitals and physicians.

Cipher Wafers—These wafers are an attractive bread substitute in cases of diabetes, constipation, and obesity, and can be obtained from the Chase Diet Sanitarium, 1032 West Eighteenth street, Los Angeles, whose announcement is also carried in this number of the Journal. These wafers have the endorsement of a number of our prominent physicians in Los Angeles.

Western Society for the Study of Hay Fever, Asthma, and Allergic Diseases—The first annual meeting of this society will be held at the Hotel St. Francis, San Francisco, June 25. A special program will be presented. The officers are Grant Selfridge, president; William V. Mullin, first vice-president; E. W. Phillips, second vice-president; Albert H. Rowe, secretary-treasurer; executive committee, George Piness and Harvey M. Hall.

DEATHS

Bower, Albert S. Died at Hanford, March 31, 1923, age 66. Graduate of Jefferson Medical College of Philadelphia, 1882, and as a young man went to Salt Lake City, where he was in active practice for forty years. Dr. Bower was a member of the medical societies of Utah and the American Medical Association.

Kearney, Elizabeth Francis. Died at Los Angeles, April 17, 1923. Graduate of the Keokuk Medical College, 1892, and licensed in California in 1900. She was formerly a member of the Los Angeles County Medical Society, the State Medical Society, and the American Medical Association.

Murphy, Lea Marion. Died at Los Angeles, April 18, 1923, age 37. Graduate of the Northwestern University Medical School, Chicago, Ill., 1911. Dr. Murphy was staff physician of the Santa Fe Railway, and had been in practice in Los Angeles for the past seven years. He was a member of the Los Angeles County Medical Society, the State Medical Society, and the American Medical Association.

Louis Milton Coy died of Vincent's angina at the General Hospital in San Bernardino, April 17. Service was held April 19 at the Congregational Church at San Bernardino and was largely attended, many members of the San Bernardino County Medical Society being present. Dr. Coy was a graduate of the College of Physicians and Surgeons of the University of Southern California in 1915, and upon receiving his degree was appointed assistant superintendent of the General Hospital of San Bernardino and in 1917 was made superintendent, serving in that capacity until two years ago, when he resigned to enter private practice. He was a member of the San Bernardino County Medical Society, the State Medical Society, and the American Medical Association.

California State Journal of Medicine

OWNED AND PUBLISHED MONTHLY BY THE MEDICAL SOCIETY OF THE STATE OF CALIFORNIA

BALBOA BUILDING, SECOND AND MARKET STREETS, SAN FRANCISCO

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VOL. XXI

JULY, 1923

No. 7

ORIGINAL ARTICLES

RESPONSIBILITY FOR STATEMENTS AND CONCLUSIONS IN ORIGINAL ARTICLES

The author of an article appearing in the JOURNAL is entirely responsible for all statements and conclusions. These may or may not be in harmony with the views of the editorial staff. Furthermore, authors are largely responsible for the language and method of presenting their subjects. All manuscripts will be carefully read, but editorial privileges will be exercised only to a very limited extent. It is believed that the manner of presentation of any subject by any author determines to no small degree the value of his conclusions. Therefore, both the author and the reader, in our opinion, are entitled to have the subject as presented by the author as little disturbed as possible by the editors. However, the right to reduce or reject any article is always reserved.

THE MEDICAL TREATMENT OF PEPTIC ULCER

By PHILIP KING BROWN, M. D., San Francisco
(From the Medical Service of the Southern Pacific
Hospital.)

The treatment of any disease depends on two main factors—a removal or amelioration of the conditions that cause it, and the symptoms and damage it produces. Since we know little about the causes of peptic ulcer, our chief aim has been to deal with the subjective symptoms of pain and the burning of the usually accompanying hyperacidity, with hemorrhage, with symptoms arising from mechanical obstruction either from contracting scar, adhesions or pylorospasm, and finally with symptoms from extension of inflammation to neighboring parts, often by perforation, commonly by close contact of these parts with the diseased area.

So far as etiology goes we have learned to recognize the likelihood of ulceration of the duodenum in uremic conditions, of ulcer associated with burns of the body, and as Ophuls has shown, with ulcer associated with arteriosclerotic changes. These are unusual occurrences, calling for no special treatment because of the probable etiology.

In serial Wassermann examinations in fifty-five gastric ulcers four gave a Wassermann + + + +, while in ninety-seven duodenal ulcers three gave a

Wassermann + + + +. This does not mean necessarily that these ulcers are syphilitic, nor does it mean that an ulcer associated with gastric crises of tabes is necessarily syphilitic, but we have had a few of these cases that were not amenable to ordinary treatment and whose symptoms, including hemorrhage, disappeared immediately on intensive anti-syphilitic treatment. This has led us to believe that some of these ulcers were syphilitic, and that in every case of ulcer a Wassermann should be made.

The relation of primary foci of infection in the mouth to ulcer has received much attention since Rosenau's work on the infectious origin of ulcer, and so reasonable does it seem, that we are growingly convinced that its commonness among railroad employes is influenced by mouth infection quite as much as by their notorious lack of proper dietetic regulation both as to quality and preparation of food, and regularity in eating, as well as haste. In the fifty-three cases that have passed through my wards in the past fifteen months, eleven have already been operated on for removal of the appendix, seven more of the eighteen that came to surgery had the appendix removed at time of operation on the gastric condition because of obvious clinical findings of trouble in the appendix. Two more had had operations on the gall-bladder and ten others were said by the roentgenologist to have cholecystitis. That these infections in the gastrointestinal tract have something to do with mouth infections seems highly probable, and in no single one of the series of fifty-three cases was the mouth in good condition except where all the teeth were on plates. Interesting also in this connection is the impression gained from discussions during the war with surgeons in the British army, who, as members of the Interallied Research Society run by the American Red Cross, assembled monthly in Paris to thresh out methods of handling the common problems of medicine and surgery. Hundreds of thousands of the lower class of British subjects received careful medical consideration for the first time, and the notorious frequency of advanced teeth and tonsil infections accompanied by ulcer of the stomach and duodenum, cholecystitis, and appendicitis was frequently commented on by British surgeons.

By way of prophylaxis, as well as an aid to healing, it is part of our routine treatment to care for

the mouth. If a patient presents himself with disease of his digestive tract it is our duty to put the entire tract in as nearly normal condition as possible, and our success in the medical treatment of gastric and duodenal ulcers, shown by the small number who return to us with recurrent symptoms, seems fairly attributable to this fact, and the early recognition of the absolute limits of medical treatment in certain cases.

For the relief of the commonest symptoms of ulcer, pain and burning—numerous plans have been put forward, all of them based on much the same idea—to rest the part and irritate it as little as possible. The three plans which contain the most generally accepted methods are outlined on the accompanying charts and were advocated by von Leube, Lenhartz, and Sippy. They all include rest in bed from two to four weeks, bland and slowly increased diet, moving the bowel by enema, the use of alkalis with more or less routine, and lavage to cleanse and remove excess of secretion or secretion abnormally present. Because it is the last one advocated, the Sippy regime is at present the most popular, although there is no reason for all the alkali elaborately dealt out day and night, or the lavage in over 90 per cent of the cases. We have absolutely no proof that they do good by hastening cure, and I am convinced that the frequent use of the stomach or even duodenal tube may do harm, and is an unnecessary procedure. As a basis for these statements an analysis of the fifty-three cases referred to shows that pain was not a symptom in five of them, that in the others it was the most marked symptom, and in all it was relieved in part, if not entirely, within three days and in no case did it persist at all beyond six days, and then was found to be due to accompanying cholecystitis. The recurrence of pain was found in one case to be due to rice, another to meat, and another to milk, and some delay is inevitable in rearranging a diet so that pain may be avoided. We do not condemn entirely the use of alkalis, and they are used in many cases, but *never* as a routine.

The Von Leube Diet

Rest in bed. No food or water by mouth for three days. Murphy drip from the start, 2 per cent glucose; thirty drops a minute; 1500 cc. in twenty-four hours. Hot applications (electric pad) to epigastrium. Fourth day 2 oz. fully peptonized milk (60 cc.), alternating with 2 oz. still Vichy every hour.

7 a. m. to 8 p. m.—Daily increase in milk by 1 oz. (30 cc.) until milk reaches 8 oz. (250 cc.) and Vichy 4 oz. (125 cc.). Enema for bowels. Alkaline powders for acidity. Semi-solids on tenth day, and then Carlsbad if breath is bad and bowels constipated. Silver nitrate if pain persists.

Sippy Treatment—Rest in bed three to four weeks. Bismuth subnitrate one-half hour A. C. 4 grams. Feed every hour—7 a. m. to 7 p. m.—equal parts milk and cream (1 to 3 oz. 30 to 90 cc.). Schedule may be changed to two or three hourly. Halfway between feedings, 10 grains (.6 grams) each of calcined magnesia and soda bicarbonate, alternating with 10 gr. bismuth subnitrate and 20 to 30 gr. soda bicarbonate. In event of diarrhea use bismuth powder and less magnesia.

After two or three days, soft eggs and well-cooked fine cereals are slowly added, so that in ten days, besides the milk and cream, three soft eggs and 9 oz. cereal are given in six feedings. No one

feeding to make a total in stomach of over 6 oz. Stomach or duodenal tube used to test and control acidity. Three alkaline powders are given during the night and tube used two or three times a night to remove any acid secretion; rarely necessary after first few days.

The disappearance of pain on diet alone is a valuable guide to therapy. For the burning sensation of hyperacidity or hypersecretion it is frequently necessary to give alkali and this is to be resorted to in preference to lavage, but in every case some modification in diet or interval of feeding is in order, so that neutralization by alkali is no longer necessary. With the alkali cut down to 10 per cent of what is used in the Sippy diet and the lavage eliminated, the Sippy treatment does not differ in fundamentals from the Lenhartz, and since the introduction of that regime we have never seen any reason to abandon it. That it must be modified to meet conditions that differ in each case is true, but the fact remains that this is the simplest and sanest of the endless treatments dignified by the name of an author, and as outlined for our nursing staff, which changes every month, we have no trouble in carrying it out.

Repeatedly patients come to us in whom ulcer has been diagnosed from typical symptoms and we obtain a history of constant use of soda bicarbonate or calcined magnesia, or both after meals, because they have learned to know that they might thereby avoid the pain. The habit is pernicious, for pain is an excellent warning that an ulcer is active and that a dietary regime is in order. Morphine in appendicitis is the only more acutely dangerous therapy that occurs to me, and woe be to the doctor who obscures his case by unwise use of that drug. The well-treated ulcer case is a well-trained dietitian, and if he is wise he will live within the confines of what he can eat without pain. The entire absence of pain in a small percentage of cases is well known, and the shock of perforation has been the initial symptom of ulcer in some cases.

A word will suffice for the von Leube dietary regime. No one uses nutrient enemas any longer in this condition, and there seems no reason for the preliminary two or three days' rest of the stomach. An enema frequently sets up marked peristalsis, very little is really absorbed, and it is a poor and difficult practice at best.

Dr. F. C. Shattuck of Boston has discussed the opposite side of this question, and just before the work of Lenhartz was published Shattuck advocated the three or four days of starvation and recounted an occasional case in which rectal feeding could be carried on satisfactorily. He was himself a sufferer from ulcer and had tried this regime with success, fasting thirteen days. He abandoned rectal feeding, however, on account of the discomfort.

The best argument for preliminary rest of the stomach is the fact that, after gastroenterostomy for ulcer, this is the rule. Nothing is given to neutralize any possible acid secretion, and while regurgitated bile may accomplish this, the fact is that there is a normal tendency of wounds in the gastrointestinal wall to heal even under adverse

conditions, and the therapeutic ideal should aim to make conditions as little adverse as possible.

Conheim advocates olive oil for relief of pain, but I have had no experience with the use of it.

It would be very satisfactory to know early in our treatment all that the X-ray and stomach tube could tell us of motor function, defective outlines, and altered chemistry, but cases with recent bleeding should not be subjected to either form of examination if there has been severe hemorrhage within a week, or while there is even very slight hemorrhage. The contribution of the roentgenologist to our understanding of what we have to deal with is of immeasurable value, and as an aid to interpretations of progress in therapy it is most satisfactory. In addition to locating the site of ulcer in many cases, he gives us a good idea of motor function, the effect of pylorus spasm if present, and a great deal of light on the influence of inflammatory processes in gall-bladder ducts and liver. We have learned to distinguish the types of duodenal bulb deformities and what they mean, the behavior of the antrum in ulcer of the duodenum and in gall-bladder disease, and the influences of different processes on the peristaltic waves of the stomach. So common are the complications of ulcer that it is important to clear up all these conditions. Two cases now under treatment will illustrate this.

G. G., age forty-five, has had pain localized in the epigastrium one and one-half hours after eating for one year, during which there have been intervals without pain. No nausea or vomiting. Pain relieved promptly by food. No occult blood in stool. X-ray study showed normal emptying time, test meal emptied out in less than half an hour. At rest in bed on Lenhart's diet, pain nearly entirely relieved in three days. Test meal, removed in twenty-five minutes, gave low normal total acidity. Nothing recurred in two attempts made in one hour and recovered again in forty minutes after test meals. When extra eggs were added to diet, pain began again, and on the twelfth day patient became slightly jaundiced and test meal showed hyperacidity and retention of some of the prunes eaten at 10 p. m. the night before. The roentgenologist was doubtful of ulcer and considered the case cholecystitis when first examined, and on rechecking changed his interpretation to ulcer with adhesions to gall-bladder. When the gall-bladder is quiet the ulcer condition makes excessively rapid emptying the rule. When the gall-bladder is acting badly there is pyloro-spasm and six-hour retention.

The next case illustrates the condition holding in uncomplicated ulcer when the ulcer is either near the pylorus, or causing acute trouble.

A. E. B., age thirty-eight. Local pain two hours p. c., nausea, drooling, three years' duration. Numerous attacks, hyperacidity, occult blood on milk diet, pain relieved by soda. X-ray reports: marginal pylorus ulcer; 50 per cent six-hour retention. Lenhart's regime begun at once. Recheck of emptying time in twelve days, with normal finding.

We have had so many such results that we are slow to consider a large retention as necessarily indicative of permanently narrowed pylorus, even when the stomach seems large and the ulcer symptoms have persisted long enough to suggest considerable induration and a large stomach points to dilation. A trial of diet should always be made until it can be shown that the retention does not

abate. The effect of gastric ulcers 8 or 10 cm. from the pylorus in stopping peristaltic waves and causing six-hour retention is well known, and the danger of producing very bad retention has been illustrated in one of our cases where a small perforating ulcer was excised, and no other pathology being present, the stomach very little interfered with, no posterior gastro-enterostomy was done. In twelve days following the operation less and less food passed the pylorus, and only by twice daily lavage was the stomach kept in good condition. Barium meal pictures and screening marked a block in line with the operative incision and forced a gastro-enterostomy. The case is mentioned to illustrate a type of retention and a difficulty in handling cases unless both surgeon and physician work together.

The treatment of hemorrhage should always begin medically because a very severe hemorrhage leaves no time and most difficult conditions for surgery, and with absolute rest most hemorrhages cease. We have had no case in my eighteen years' service, when one of my cases had to be operated on for control of hemorrhage. Several times very severe hemorrhages have been controlled by rapid lavage with ice water as suggested by Ewald, and once, after several days of vomiting of foul-smelling, partly digested blood in a private case of Dr. Coffey, I washed out an enormous amount of similar material with ice water and then poured in an ounce of adrenalin in four ounces of tap water, turning the patient on his right side and elevating the foot of the bed. After a few minutes this was washed out. A Lenhart regime was instituted and several weeks later Dr. Coffey removed an enormously thick-rimmed penetrating ulcer of the lesser curvature. Einhorn has suggested the use of adrenalin in 1 cc. doses by mouth and hyperdermally in 1-2000 strength. The use, through tube, of enough adrenalin after cleansing the stomach would seem more reasonable, and certainly was successful in the most serious case in my whole experience.

The occurrence of blood in vomitus or stool in an unstudied case offers too poor a chance of relief by surgery which should be held in reserve for trial in event of failure from other methods to control bleeding. In the interval much light on the cause of hemorrhage may be forthcoming. Statistics show that hemorrhage occurs about equally from duodenal and gastric ulcers and four times more commonly than from cirrhosis of the liver, and five times more commonly than from the unknown causes. That it may occur from acute and chronic appendix conditions was called attention to by Moynihan fifteen years ago, when he reported twelve cases, in one of which several pints of blood were lost. All had the pain symptoms of gastric ulcer and were so regarded by him before operation.

One striking case of this kind occurred in my hands. In October, '09, Mrs. E. F. B., age twenty-six, was having her third attack of more or less constant pain, worse immediately after eating for two hours and localized just below the sternum. Nausea was present, but not vomiting. She had

had two serious attacks previously and several mild ones. Both Boas and Rosenheim had seen her in attacks while she was in Germany, and regarded her as having gastric ulcer and so treated her. Boas thought she also had gall-stones. She had vomited blood on several occasions in earlier attacks, and in the present attack there was constantly occult blood in the stools. On Lenhartz's regime she improved, but the pain was not entirely controlled. Nervous disturbances seemed to aggravate it. In the third week, while still in bed, she had an acute attack of appendicitis with a temperature of 102.5. This subsided and several weeks later Dr. Charles G. Levison removed her appendix and severed extensive adhesions and thoroughly explored her stomach and found no ulcer. An enlarged and slightly calcareous gland near the appendix was removed also. When last seen in 1913 she had had no return of her ulcer symptoms.

In cases of continued bleeding where operative risk is poor a transfusion is in order, and this alone may stop the bleeding. At least it will assist in tiding the patient over the surgical intervention. In the meantime the Lenhartz's diet is continued unless the hemorrhage is quite severe, in which case it is interrupted twenty-four hours.

SUMMARY.

Our regime in all cases where the careful history and physical examination point to ulcer and in which no recent bleeding has occurred is:

Confine patient to bed. Give four prunes at 10 p. m. Test meal at 7 a. m., removed at 8.

Lenhartz's diet, bowels moved by enema every other day.

Record occurrence and duration of pain and burning.

Gastro-intestinal study second day, including gall-bladder pictures.

First milk stool examined for occult blood and everyone thereafter, until it is no longer found.

Consideration of complications suspected in cases where pain continues at all after the second day following X-ray study.

Further study of gastric secretion if no compli-

cations are found, and use of alkali while diet is being modified *if burning sensation occurs*. Starch food, especially rice, as pointed out by Stone of Pasadena, and meat because it stimulates acidity, are the common offenders.

If symptoms subside at once and do not recur at all as is our experience in the vast majority of uncomplicated cases, surgery is not considered.

If the emptying time is delayed and a recheck in twelve days shows it to be still present, the case is turned over to the surgeon.

If a medically treated case re-enters the hospital with a return of his symptoms, he is questioned closely as to his habits and dietary regime. If found to have been constantly careless his only chance is surgery. If careful, and still the trouble has recurred, surgery seems to be indicated. The worse the conditions the clearer the surgical indications and the better the surgical results. The extreme conservatism of the Southern Pacific Hospital surgeons gives them the difficult cases in which indications for operation are plain, while the success of the medical regime is marked by the very few cases who ever return.

On discharge a diet card is given each patient. This is an arrangement of foods in the order of their digestibility, and is adapted from a scheme gotten up by Dr. D'Arcy Power.

Southern Pacific Company
Hospital Department—Pacific System
Directions for Diet

Eat slowly. Never swallow coarse food until it is chewed soft. Never swallow mush without masticating it and mixing it with the saliva. Avoid very hot and very cold drinks. Do not do heavy exercise after eating. Do not smoke. Do not wash down your food. Do not eat heartily when very tired. Fatigue is often mistaken for hunger.

You May Eat—Bread one day old—toast; crackers, zwieback; dry breakfast foods; soft-boiled, poached or scrambled eggs—omelet plain; macaroni, spaghetti, or other Italian pastes with tomatoes or a little grated cheese; boiled rice; plain soups; vegetable and milk soups; most white fish; plain roast or boiled beef, mutton, veal, chicken, turkey, game (no stuffing); asparagus, spinach, summer squash, string beans, green peas, boiled celery, kale; stewed

LENHARTZ'S DIET

Day	Cal-ories	Eggs	MILK	MILK SUGAR	SCRAPED BEEF	BOILED RICE	ZWIEBACK	BUTTER	CHICKEN
1	280	Raw 2	100 cc. (3½ oz.)						
2	470	Raw 3	200 cc. (6½ oz.)						
3	637	Raw 4	300 cc. (10 oz.)	20 gm. (5 dr.)					
4	777	Raw 5	400 cc. (12½ oz.)	20 gm. (5 dr.)					
5	966	Raw 6	500 cc. (16½ oz.)	30 gm. (1 oz.)					
6	1135	Raw 7	600 cc. (20 oz.)	30 gm. (1 oz.)	36 gm. (9 dr.)				
7	1580	Raw 4	700 cc. (23½ oz.)	40 gm. (1½ oz.)	70 gm. (2½ oz.)	100 gm. (3½ oz.)			
8	1720	Raw 4	800 cc. (26½ oz.)	40 gm. (1½ oz.)	70 gm. (2½ oz.)	100 gm. (3½ oz.)	20 gm. (¾ oz.)		
9	2135	Raw 4	900 cc. (30 oz.)	40 gm. (1½ oz.)	70 gm. (2½ oz.)	200 gm. (6½ oz.)	40 gm. (1½ oz.) or toast 20 gm.		
10	2475	Raw 4	1000 cc. (33½ oz.)	40 gm. (1½ oz.)	70 gm. (2½ oz.)	200 gm. (6½ oz.)	40 gm. (1½ oz.) or toast 20 gm.	20 gm. (¾ oz.)	50 gm. (1½ oz.)
11	2941	Raw 4	1000 cc. (33½ oz.)	40 gm. (1½ oz.)	70 gm. (2½ oz.)	300 gm. (10 oz.)	60 gm. (2 oz.)	40 gm. (1½ oz.)	50 gm. (1½ oz.)
12	2941	Raw 4	1000 cc. (33½ oz.)	40 gm. (1½ oz.)	70 gm. (2½ oz.)	300 gm. (10 oz.)	60 gm. (2 oz.)	40 gm. (1½ oz.)	50 gm. (1½ oz.)
13	3007	Raw 4	1000 cc. (33½ oz.)	40 gm. (1½ oz.)	70 gm. (2½ oz.)	300 gm. (10 oz.)	80 gm. (2½ oz.)	40 gm. (1½ oz.)	50 gm. (1½ oz.)
14	3007	Same	as thirteenth day						

peaches, plums, apricots, apples, pears, blackberries if seedless; milk puddings, tapioca, rice, bread, corn-starch, jellies, custard; cocoa, weak black tea, aerated waters.

Doubtful—Not Much at One Time—Mushes; sweet cakes; fried eggs; ham, bacon (if taken they are better broiled to a crisp); sardines; herrings; oysters; pork; duck; cheese; tomatoes, beets, potatoes, carrots, parsnips, egg and oyster plants, mushrooms; strawberries, raspberries, bananas; dumplings; nuts never unless carefully masticated; weak coffee, one cup daily.

You Must Not Eat—Hotcakes, pancakes, muffins; fruit cake; hard-boiled eggs; rich soups, chowder; salmon, lobster, crab, shrimps, smoked and salted fish; hashes; sausage; fried, greasy or recooked; meats, corn beef or other cured meats; onions, cabbage, turnips, cauliflower, beans, corn; salads; oranges, lemons, melons; pastry made of puff paste; Christmas pudding; mince pie; strong coffee or tea.

UNUSUAL MALIGNANT "MIXED" TUMOR (ADENO-SARCOMA) OF THE KIDNEY IN A YOUNG CHILD *

By A. J. HOOD, M. D., and HENRY ALBERT, M. D.,
Reno, Nevada.

This report of a case of malignant kidney tumor in an infant is offered because of the rarity of the disease and the paucity of literature on the subject. This patient has special interest because the child came under observation before any signs or symptoms of the tumor developed, and hence the rapidity and course of the growth could be observed. It also admonishes us to ever be on the alert to detect this condition, coming on as it does without any or very little pain and without any obvious symptoms until it can be definitely palpated, or until it is too late to offer the operative hope that early diagnosis and operation would afford.

Clinical Record—A. J. H., a girl two and a half years old, with a normal birth record and a practically normal infancy record until the present illness. We were called to see the child on May 10, 1922. There was a history of the child having pulled a larger child over on top of her, the weight of the child falling on her abdomen, and at the same time she struck her head upon the floor. This was followed by complaint of some pain in the abdomen, and vomiting was persistent. There was no evidence of abnormal condition in the abdomen, and we concluded that the child was suffering from the effects of the shock and the injury to the head. The child was apparently well in three days, and we did not see her again until July 10, two months after the first visit. The mother stated that the child had occasionally complained of slight pains in the abdomen in the interim between our visits. She had not interpreted the symptoms as of sufficient importance to ask for the services of a physician. A few days before our second visit the mother had noticed a swelling in the right lower abdomen, her attention having been called to it because the child had been kicked in the stomach by another child, and had complained of slight pain. The bowels had functioned properly and the child had been apparently well, with

the exception of the complaint of the vague pains in the lower abdomen. We kept her under observation for about a week. She complained of but little pain and her bowel movements were easy. On one occasion the mother noticed a little blood in the commode. The child had a bowel movement at the same time, and the mother did not know the source of the blood. The urine was normal. The last three days the child began to run an afternoon fever. During the week she failed very rapidly, becoming haggard and emaciated. In the space of the week the abdominal mass grew past the umbilical line and downward into the pelvis, the increase in size being at least 10 per cent. Physical examination revealed the liver pushed up into the fifth intercostal space. The lungs were negative. Caput medusae well marked, the engorgement of the veins extending all over the abdomen. There were two well-defined areas of brownish discoloration similar to that of Addison's disease, and of about the size of a dime, on the skin of the abdomen. The mass was palpable in the right lower abdomen as a hard, smooth, and slightly movable tumor extending over one and a half inches to the left of the umbilicus and down into the pelvis, and posteriorly throughout the entire right lumbar region. Above, a small margin could be detected between the superior pole of the mass and the liver. Percussion confirmed palpation, as to the extent of the mass. Over the lower portion of the mass, crepitation significant of air in the intestines attached to the mass, was detected. No ascites was noted and the superficial glands not palpable. The left side was negative. The urine was negative, although hematuria may have been present at one time. Blood examination was also negative. Neither X-ray examination nor the phenolsulphonephthalein test were made.

Operation (by A. J. Hood, assisted by Vinton A. Muller)—On opening the right peritoneal cavity through a right rectus incision, the mass was clearly exposed below. Several small metastases were seen in adjacent loops of intestine. A loop of the ileum was incorporated in the mass, and required resection to remove it. The mass was easily freed down to the kidney pedicle, which was clamped, and the tumor and kidney removed en masse. Great care was used to control hemorrhage. The condition of the child was too poor to permit proper care of the raw peritoneal edges. Wound closed. The child died on the third day following the operation. There was no autopsy.

Gross Pathology—The mass consisting of tumor and kidney measured 10 x 12 x 13 centimeters, and weighed 1750 grams (three and one-half pounds). The kidney, although free from tumor substance, was, nevertheless, flattened by the pressure of the rapidly growing neoplasm. The kidney measured 2 x 5 x 9 centimeters and presented evidence of marked fetal lobulation, and slight hydronephrosis. No suprarenal was found in connection with the removed mass.

The tumor was rather spherical in shape, and slightly lobulated. The surface contour was in most places rather smooth, indicating the presence of a fairly well-defined capsule. In other places the

* Read before the Washoe County (Nevada) Medical Society, March 13, 1923.

surface was rather rough, due to torn shreds of connective tissue. This occurred where the tumor was adherent to the bowel. The tumor was soft in consistency. The cut surface presented a rather mottled appearance, due to the light pink color of the tumor substance, bright red areas of hemorrhage and grayish areas of necrosis. At one place the necrosis had led to a cyst, which measured two centimeters in diameter. The tumor substance was very friable. It readily gave way under slight pressure between the thumb and finger.

Microscopic Pathology—Sections were made from various portions of the tumor. All presented areas of round cells (sarcomatous portion) containing in its substance a number of sections of tubules lined by cuboidal epithelial cells (adenomatous portion). These areas were separated by rather loose connective tissue. In some places there were areas of necrosis; in others, hemorrhage. Pathological diagnosis. Adeno-sarcoma (may also be called malignant "mixed" tumor).

OCCURRENCE OF KIDNEY TUMORS IN CHILDREN

Malignant tumors of the kidney may be sarcomas, carcinomas, hypernephromas, or "mixed" tumors. Mixed tumors occur usually in children from six months to six years of age. Tumors of early life choose the kidney as the second most common site. D'Espine and Piso, in analyzing 339 recorded cases of tumors in children, found that 52 per cent involved the eye and orbital structures, and 20 per cent the kidney. Porter and Carter reviewed the cases of kidney tumors in children, which occurred in the Stanford and California hospitals during the five years prior to 1920, and found that of the eleven cases which occurred, four were sarcomas, three carcinomas, two hypernephromas, and two malignant tumors unclassified.

The origin of "mixed" tumors of the kidney is best explained on the embryological basis. This likewise explains the rather peculiar combination of adenoma and sarcoma such as occurred in our patient.

The cortex of the kidney, the adrenal and the muscles and bones of the back have their origin from the mesothelium, which in turn has its origin from the mesoblast. Mesoblastic tissue is of the connective tissue type. The development of the mesothelium and the further differentiation of the latter into muscle, bone, kidney substance has resulted in the formation of highly specialized and rather easily recognizable types of tissue. A benign tumor of renal tubule structure represents an adenoma. If the cells of the neoplasm take on a somewhat more embryonic type, a carcinoma is produced. If the cell type reverts sufficiently far back in the embryological scale, they will resemble those of the mesoblast, and accordingly represent a sarcoma. If some of the cells of the tumor are but slightly removed from the typical tubular structure of the kidney, and others are of the embryonal mesoblastic type, we get an adeno-sarcoma, the type of tumor represented by our case. Since in our patient the kidney was not involved, and since the presence of tubules excludes its origin from the adrenal, it is assumed that the tumor had its origin

in a renal "rest"—a bit of mesothelial tissue, which originally was no doubt intended to be a portion of the kidney proper, but which was separated from the main mass and failed to undergo proper development, but rather assumed an atypical neoplastic growth.

SUMMARY

1. Malignant tumors of the kidney, or kidney region are of rather rare occurrence in children.
2. Many of the kidney tumors of childhood are of the "mixed" type.
3. "Mixed" malignant tumors of the kidney always contain sarcomatous elements.
4. Certain "mixed" tumors contain tubular gland in addition to sarcomatous elements, and hence represent adenosarcomas.
5. Adenosarcomas of the kidney, or kidney region, originate from "rests" of mesothelial tissue of the type originally designed to form typical kidney structure.
6. Adenosarcomas and other "mixed" tumors of the kidney which occur early in life are rapid in growth, produce but little pain and usually terminate fatally. Metastases occur by way of the blood stream.
7. The operative mortality of the tumor is high. Death frequently occurs soon after the operation. Those that survive the operation usually succumb to recurrence of the tumor.
8. An earlier diagnosis and prompt operative removal represent the only hope of saving more of these cases.

DISCUSSION BY DR. WILLIAM OPHULS

The case presented by Drs. Hood and Albert is a characteristic example of an interesting type of malignant tumor, which usually occurs in infants during the first three years of life. They are characterized by their rapid growth to a very large size, their fatal course, and their obscure origin.

The histological structure of the tumor in the above case is comparatively simple, the tumor consisting of a sarcomatous stroma with glandular inclusions. Many of these growths in addition showed islands of cartilage, areas of smooth and striated muscle fibers and other tissues. They are certainly due to some abnormality in the embryonic development. The exact nature of this embryonic disturbance has been much discussed, but no definite conclusion has been reached.

However, it is now fairly generally assumed that, in spite of the great variety of tissues observed, they all may have their origin in the renal blastema. If this is true, some of the cells of the renal blastema must be sometimes misplaced outside of the kidney proper, because it is a well-known fact that these tumors do not always arise within the kidney. This seems to have been the case in the observation described by Drs. Hood and Albert, because it is stated that the kidney was free from tumorous substance, but was flattened out by the pressure of the rapidly growing neoplasm.

Science Advances Slowly—It is characteristic of sincere scientific speculation that it cannot at any given moment be applied generally to public affairs except with the utmost caution and the most copious dilutions of common sense. This is because of the very nature of scientific inquiry, which, even when it does advance, advances by a sort of self-correcting curve that often brings it back almost to the place where it began.—Gilbert K. Chesterton, the Century, May, 1923.

AN HISTOLOGICAL STUDY OF RESULTS OBTAINED THROUGH INSTRUMENTAL TREATMENT OF PYORRHOEA *

By F. V. SIMONTON, University of California

The wide dissemination of information concerning research in focal infections, which has obtained in the last decade, has brought the physician and dentist into close co-operation. A great variety of conditions, from rheumatism to insanity, have been attributed to dental infections by different investigators.

The extremists have no difficulty in disposing of their problems. The radical adopts heroic surgery and the skeptic disregards the teeth entirely. The man who follows the middle path (representative of the larger percentage of the professions) finds it difficult after studying the conflicting reports and reflecting upon the variability of his own experiences, to satisfactorily orient himself on the relationship of teeth to health. Consequently any



FIG. 1

data which may throw additional light on this subject may be of interest to him.

Pyorrhoea is one of the sources of mouth infection. The physician is interested to know the amount and kind of infection in his patient's mouth, the nature of portals of entry and the results that may be obtained through treatment. He is also concerned with the rapidity with which such results, if corrective, can be obtained and with the permanency of them.

This study was pursued in collaboration with W. H. Hanford of Oakland and C. O. Patten and C. Westbay of San Francisco. It was undertaken in an effort to determine whether a regeneration of tissue, lost through pyorrhoea, was possible; and whether, if new tissue were formed, it would be merely scar or a true regeneration of all the structures involved.

Diseased Tissue—Cases were selected from which pyorrhetic tissue might be excised for study of the disease. Radiograms were taken before excising the material en masse, and a very careful record made of the extent of detachments (depth

of pockets). Microscopic examination of the section shown in Figure 1 (which includes two adjacent bicuspid, their periodontal membranes, the septal gum and the intervening alveolar process) exhibits the following:

Fig. 2. Septal gum. Note intense inflammation round cell infiltration, edema, hemorrhagic elements, almost complete destruction of epithelium.

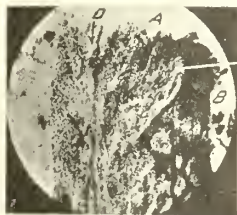


FIG. 2

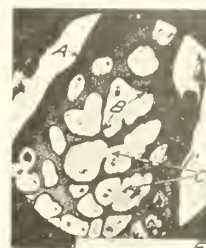


FIG. 3

Fig. 3. Junction of septal gum and tooth. Note inflammation, destruction of epithelium, detachment of membrane from tooth.

Fig. 4. Periodontal membrane in the region of the crest of the alveolar process. Note inflammation of membrane, erosion of bone by osteoclasts, osteomyelitis.

Fig. 5. Crest of alveolar septum between the two teeth. Note osteoclastic action on bone and osteomyelitis.

Note—The three following pictures represent fields from a transverse section of a pyorrhetic bicuspid with its circumjacent tissues. Three stages of destruction are evident. Fig. 6 shows partial destruction of alveolar process. Fig. 6A exhibits but one fragment of bone remaining and in Fig. 6B the bone has completely disappeared and the tooth has been eroded even penetrating through the cementum into the dentine.

Treated Tissue—A case was now selected, which radiographically and clinically was very similar to the preceding. That is, a patient was sought presenting two pyorrhetic bicuspid in which the amount of destruction compared as nearly as possible to the case from which the diseased

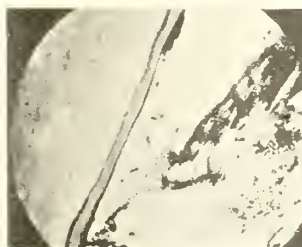


FIG. 3

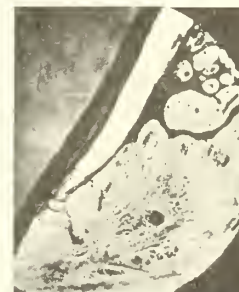


FIG. 4

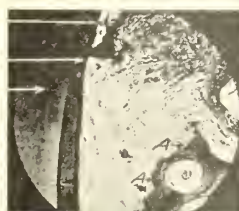


FIG. 5



FIG. 6

* Presented before the Marin County Medical and Dental Societies.

tissue was removed. (It was necessary also to find a case in which the removal of the tissue was justified by prosthetic requirements.)

Such a patient being found, a very careful instrumental examination was made. The extent of detachments was recorded on a special chart. Radiograms were taken with an equipment designed

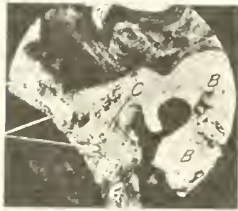


FIG. 6



FIG. 6A



FIG. 6B

to procure the same amount of current, time of exposure, angle, position, etc., at repeated intervals if necessary. Photographs were taken and models prepared. The tissues were then treated (by instrumentation, scaling the roots and mechanical stimulation) for nine months. A new examination and charts were made; new radiograms taken under the same exposure and from same relative position as before. Photographs and models were again prepared. According to this data there was an average reduction in the depth of pockets of about two millimeters, which indicated regeneration and healing. The tissue was now excised and prepared for the microscope. (Contrast Figs. 7, 8, 9 and 10 with Figs. 2, 3, 4 and 5.)

Fig. 7. Shows septal gum. Note lessened inflammation, basement membrane and epithelium intact and complete.

Fig. 8. Shows point of junction of gum and

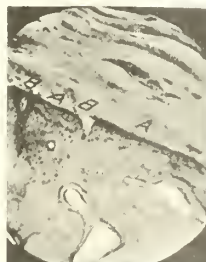


FIG 10

tooth. Note lessened inflammation, new epithelium, reattachment (tear at bottom of sub-gingival sulcus probably artifact due to cutting on microtome. New sections are being prepared for a closer study of this detail).

Fig. 9. Shows periodontal membrane in the region of the crest of the alveolar process. Note

general repair of bone, lessening of inflammation, absence of osteomyelitis.

Fig. 10. Shows crest of alveolar septum between the two teeth. Note filling in of bone. Salients of destruction persisting at B. Lessened inflammation.

CONCLUSIONS

As a result of this work we believe that instrumental treatment of pyorrhoea is beneficial, that some regeneration takes place, that the histologic picture of the treated tissue is essentially constructive, whilst that of the diseased tissue is essentially destructive. We hope to determine the amount of regeneration possible by further work; we are also seeking methods for augmenting the repair. From bacteriologic studies in progress, we believe the infection is rapidly and materially diminished by treatment.

The original staff of workers has now been increased to include three physicians, two bacteriologists, one chemist, one biochemist, four dentists and two student assistants. It is organized as the "California Stomatological Research Group." A composite study of pyorrhoea, and allied problems, including nutritional phases, is being made.

The work is being carried on at San Quentin Prison, through the support of Warden James A. Johnston and with the co-operation of Dr. L. L. Stanley, resident physician. The services of the members of the group are largely volunteer, some financial support is being received from the California State Dental Association. The work is also being strongly aided by Dean Guy S. Millberry of the University of California Dental College.

FOCAL DENTAL INFECTION

The relation of pyorrhoea or apical abscess to metastatic involvement of the bones or joints is a subject that presents many angles. The more acute the infection; the more virulent the character of the infection, the greater is the probability of migratory infection. The thoughtless extraction of teeth should be discontinued. If benefit is to come from the extraction of teeth or the treatment of pyorrhoea, such treatment must be instituted before structural changes have taken place in bones or joints that have undergone metastatic infection. It is true that eradicating focal infection in the mouth sometimes brings brilliant results. It is equally true that many times the result is more discouraging. However, the removal of infection is always indicated when there is positive indication that it exists and is not a result of guesswork.

In considering the dental side of this question, the age of the patient must be taken into consideration. In the third and fourth decades of life regeneration of bone is by far less than that which may be confidently expected in the second decade, at which period replacement of bone is both rapid and voluminous.

It is true that many teeth that should be extracted are left in place. It is equally true that many needless extractions are being carelessly done.

(First Avenue and Parnassus, San Francisco.)

THE NEUROLOGICAL ASPECTS AND LATE SYMPTOMS OF EPIDEMIC ENCEPHALITIS *

By THOMAS G. INMAN, M. D., San Francisco

When the present epidemic of lethargic encephalitis made its appearance in Europe in the year 1917, the attention of the medical profession was attracted principally to what now may be called the major types of the disease. The general conception of the condition was of an acute illness characterized by weakness, somnolence, fever, and ophthalmoplegia with occasional meningeal irritation, myoclonic movements and radicular pain. With a death rate of from 20 to 30 per cent it seemed at first that this mortality told the story of the seriousness of the disease, and that those who successfully weathered the initial acute period would entirely recover. Never in the history of medical experience have hopes so justly aroused been doomed to greater disappointment. Many patients survived acute attacks of such severity that for weeks death was momentarily expected or after lying for months in a lethargy so profound that they could be aroused only with difficulty. After weeks or months devoted to convalescence and with complete recovery apparently imminent, many of these patients resumed their work only to find that residual symptoms persisted or that new ones arose, causing invalidism in a new form. Moreover, there now appeared types of the disease similar in character to the residual forms of the acute disease, but in which the onset had been either so insidious as to pass unnoticed or in which there could be elicited a history of an attack of dizziness, a few days' illness of unknown nature or of something which passed as influenza.

From pathological evidence, and to some extent from clinical experience, it would seem that in epidemic encephalitis we are dealing with a 'generalized infection which exerts its greatest influence on the central nervous system. That some toxic factor accompanies the severe infections will not be denied, but an understanding of the clinical symptoms will be obtained from a consideration of the gross and microscopical changes observed in the affected tissues.

With widespread cellular reaction throughout the brain and leptomeninges, with more or less extensive accumulations of cells about the smaller blood vessels and with minute hemorrhages in the brain substance, and upon its surface all varying in degree, both as regards location and with the individual case, it is not to be expected that the disease will be characterized by an orderly array of symptoms whose significance may be easily interpreted at all times. Thus, in one case the leptomeninges may bear the brunt of the attack, in another the roots of the cranial nerves seem to be especially affected or the process may be almost wholly confined to the midbrain and pons. Occasionally, a spinal type is observed in which radicular pain and muscular spasms predominate.

As an illustration of the incidence of certain

common symptoms, a group of eighty-seven cases reported by Ferrari may be quoted.

Fever was noted 41 times; somnolence, 29; lethargy, 18; stupor, 13; coma, 9; asthenia, 12; vertigo, 17; headache, 31; strabismus, 10; nystagmus, 10; muscular rigidity, 10; myoclonic movements, 6; ptosis, bilateral, 32; unilateral, 2; facial paralysis, 11.

As previously suggested, the late or chronic forms of epidemic encephalitis are derived from two sources. The first group, and the one most easily recognized, follows the acute stage either immediately or after the lapse of months or years. Careful inquiry, however, into the histories of these recurrent forms will generally disclose the fact that never was there a complete return to the former state of health. There had been a change in the disposition, a tendency to rest more than formerly, excessive somnolence, insomnia, unusual gain in weight, forgetfulness, etc., noted by immediate members of the family or by employers if not by the patients themselves.

It would seem that the greater proportion of the individuals in this group present some of the symptoms characteristic of the so-called Parkinsonian syndrome. There is the mask-like face, the muscular rigidity, occasionally the tremor, the difficulty in swallowing, and the accumulation of saliva in the mouth so characteristic of paralysis agitans. But in addition to these symptoms there may be others left over from the acute stage which will serve to link the two periods together. Radicular pains may persist, somnolence may continue or give way to distressing insomnia, there is increasing muscular weakness and spasticity, eye-muscle paralysis demand frequent change of glasses, vasomotor disturbances are evident, and symptoms centering about the heart and digestive organs testify to the fact that widely separated parts of the central nervous system are still involved.

The second group, which should be designated as the subacute form of epidemic encephalitis, may present considerable difficulty in diagnosis. There may not be any certain, focal signs at first or such local disturbances as occur may be fugitive in nature, disappearing from time to time, so that no suspicion of their real nature may be aroused. Mental depression was the presenting complaint in one such case, and it was not until eye-muscle symptoms, subjective sensations of stiffness of the face muscles, leg pains, and absence of the abdominal reflexes on one side occurred that the actual condition was suspected.

A history of the patient's condition during the months preceding the onset of the present symptoms may be of great importance in arriving at a diagnosis. It may be noted that there had been a brief illness not unlike mild influenza, a gastrointestinal upset of moderate severity, pains in the back and legs, diagnosed as muscular rheumatism, or an abrupt attack of dizziness. One patient stated that he felt as though he had been struck in the stomach and, indeed, had been suspected as having ptomaine poisoning. After some months, during which there appeared radicular pains in the chest and abdomen, marked hypochondriasis with

* Read before the San Francisco County Medical Society, February 13, 1923.

impulsive ideas, tremor in the face and tongue, and insomnia, it became evident that a serious nervous affection lay behind the numerous complaints.

By grouping about some prominent symptom, it has been possible to construct quite a number of clinical syndromes, one author having collected more than twenty types. But it would seem more rational to look upon the disease as a generalized infection, remembering that the presenting symptoms form only the peak which projects above the lowlands, a closer approach and more careful scrutiny bringing the latter into the picture in the shape of minor disturbances which previously had passed unnoticed.

In a disease which may present so much cellular activity within the brain substance, it is probable that in all cases there will be some impediment to the normal flow of blood throughout this organ, with consequent abnormal variations in intracranial pressure. In this manner, parts of the brain less actively involved in the disease process will show, from time to time, disturbances in function. There will be in the great majority of cases, if not in all, a noticeable lowering of the psychological level. It is natural to believe that any frank psychotic symptoms which develop from the disease, *per se*, will be those characteristic of the toxic-infectious group. Thus, phenomena dependent upon disturbed cerebration will include the delirium, hallucinations, and motor restlessness of the acute stage, while in the subacute variety there may appear hypomania, depression, memory disturbances, slowing of the intellectual processes, marked anxiety, conduct deviations, and the like. There is one peculiar characteristic of the lethargic state which speaks for the limited influence of a toxic factor, and that is the surprisingly abrupt return to full consciousness which frequently occurs spontaneously or as a result of sharp questioning. These periods may be of short duration, the patient quickly lapsing into the former condition.

Much discussion has arisen as to the significance of the frequently noted implication in the disease process of the midbrain and great ganglionic structures of the brain base. Undoubtedly, a majority of all forms show some involvement of these structures. It has been suggested that the organism accountable for the disease enters the cranial cavity by way of the naso-pharynx and that the brain in this vicinity is first affected. Be this as it may, it is a well-recognized fact that disturbances in the nerve supply to the muscles of the eyes and face, and symptoms due to dysfunction of the thalamus, corpus striatum and other parts of the extrapyramidal system are exceedingly frequent. So common are symptoms arising from disturbance of function in this region that, early in the history of the present epidemic, many competent observers stated that, without evidence of eye-muscle disturbance, a positive diagnosis of this disease could not be made. This probably states the case for midbrain involvement a little too positively.

However, from a very definite and frequent attack upon the great ganglia and pontine structures, there has arisen the conception of a moderately

stable syndrome, which influences the clinical picture in more than 80 per cent of cases whether arising from an acute or subacute source. To this symptom group, the names Parkinsonian type, hyperkinetic type, bradykinesia, etc., have been given.

It was early pointed out by Edinger that the corpus striatum ruled over that form of muscular action which we call automatic, and that in disease of this structure the ability to perform spontaneous movements was lost. More recently, Ramsey Hunt has further contributed to our knowledge of the physiology of this region, and has shown that when disease affects that portion of the corpus striatum known as the globus pallidus, there is produced a group of symptoms familiar to us as paralysis agitans in which paralysis of automatic associated movements, muscular rigidity, and rhythmical tremor predominate.

While in both the residual and subacute forms of epidemic encephalitis certain elements of the Parkinsonian syndrome frequently occur, it must be acknowledged that rarely, if ever, are evidences of disease in other parts of the brain wanting. The outstanding symptom of the Parkinsonian type is the muscular rigidity. The facial expression is mask-like, the skin flushed, the arms and hands are held in a fixed position, or when moved lack the freedom of spontaneous motion, the gait is more or less spastic. Tremor may or may not be present or may be evident at one time and not at another. As a general rule, it may be stated that the greater the spasticity the less likelihood will there be of an observable tremor. Only rarely will the tremor closely resemble that seen in classical Parkinson's disease. Muscular weakness will be a prominent feature.

Added to this central picture will be found other symptoms which will aid in establishing a diagnosis. Inequality of the pupils is common, and the Argyll-Robertson pupil has been observed. There may be other eye-muscle paralyses. Only occasionally are changes noted in the optic discs, but slight swelling of the nerve head or, more frequently, moderate reddening of the disc may occur at some time in the course of the disease.

While the pyramidal tracts may be involved, it is a singular fact that they escape more frequently than their close proximity to the striatum would seem to warrant. Still, disturbance in these motor structures may be present and will be expressed in greater muscular weakness and spasticity, and the presence of pathological reflexes.

Lower in the brain-stem, symptoms arise according to the part affected. Facial paralysis, deafness and tinnitus, vagus disturbances and hypoglossal paralysis have all been observed.

Peculiarly resistant to both time and treatment are the root-pains emanating from old foci of the disease in the spinal cord or its membranes.

As an aid to diagnosis, it is to be expected that examination of the spinal fluid might be of some assistance. But the results of this procedure are to be accepted only as corroborative evidence, since in some of the quite active cases the fluid may be entirely negative, at least when a single examination is made. When changes are present, increase

in the cell content, up to several hundred per cmm., may be obtained. There is no single type of cell constantly predominating, the increased proportion seeming to favor the lymphocyte. The globulin is not increased in correspondence with the pleocytosis, a phenomenon constituting the so-called cytoglobulinic dissociation, thought to be of special significance in this disease.

The colloidal gold curve, when present, approaches to that seen in the paretic form of cerebro-spinal syphilis, but is to be interpreted only as evidence of an inflammatory reaction within the cerebro-spinal parenchyma. The presence of an increased sugar content in the fluid has been reported.

A further recital of symptoms and findings would be tantamount to naming all the effects which might arise from disturbance in function in any part of the central nervous system, the object of such repetition as has been given being to impress the fact that in epidemic encephalitis we are dealing with a disease, which, up to this time at least, has no pathognomonic symptoms of its own. It may simulate other disturbances in the nervous system and may be imitated by other diseases, it may be recognized at times at a glance, at others, requiring a careful assembling of history, repeated painstaking examinations and long waiting before a diagnosis can be made with certainty.

SURGERY OF THE GALL-BLADDER *

By STERLING BUNNELL, M. D., San Francisco

Note—This article deals with the physiology and etiology of biliary infections. The symptomatology, pathology and surgery will appear in the succeeding number of the Journal.

In recent years our conception of the conditions of the gall-bladder has undergone a material change. Gall-bladder disease was considered to occur after the age of forty years, and we thought of it in terms of the presence or absence of gall stones. The gall-bladder has even been called a profitable rock quarry. We now find that cholecystitis usually starts in the 'teens and constitutes the second most common cause of indigestion, appendicitis being the first. It is true that grossly pathological gall-bladders are usually found in later life, but a careful questioning of these patients will generally reveal a history of recurrent bilious attacks over a period of one to three decades. Gall-stones can be considered as mile-stones, as they indicate a long pathological journey. They are not the cause of cholecystitis, but constitute an occasional by-product. Formerly gall-bladders were drained, before it was realized that a ten-day drainage cannot cure a deep-rooted catarrh of a mucous membrane. Only the badly diseased gall-bladders were removed. Now mildly infected gall-bladders are removed early, as we know that the infection is deep in the wall. The patient is spared years of ill health. Gall-bladder surgery was formerly twenty years behind the disease.

PHYSIOLOGY

Pressure System—The liver secretes bile at about 300 mm. pressure of water, and if the com-

mon duct is so obstructed that the pressure rises above this, the bile of the liver will be absorbed by the lymphatics and pass into the blood stream, and the patient will become jaundiced. The normal pressure of bile in the common duct is from 100 to 150 mm. of water pressure. It is seldom over 300 mm. This pressure is controlled by the tone of the sphincter of Oddi. This sphincter when in extreme contraction can be forced by 600 mm. of water pressure. The pressure in the common duct is influenced greatly by the respiratory movements. Vomiting will suddenly raise it to 1000 mm. This is but momentary, as the sphincter will yield. The gall-bladder has been seen to contract from five to eight times a minute during digestion. It can never fully empty itself. Its musculature is not great, and as its maximum contracting force is only 313 mm. of pressure, when under stimulation by electricity, it is seen that this is practically the pressure of the secretion of bile, so that the gall-bladder has but little function in emptying the ducts. Therefore, the sphincter of Oddi controls the pressure of bile in the ducts. If the gall-bladder be removed the bile-ducts will dilate. If the gall-bladder be atrophied from disease, it is found that in the majority of cases the ducts will be dilated. If, however, we remove the gall-bladder and at the same time the muscle of the sphincter of Oddi, the bile-ducts will not dilate. Therefore, it is probable that the gall-bladder takes up to some degree the fluctuations of pressure in the bile-ducts, due to the contractions of the abdominal muscles. Certain animals, such as the horse, rhinoceros, deer, peccary, pigeon, rat (not the mouse), gopher, and mole have no gall-bladders, and in these animals the bile-ducts are not dilated and there is present a sphincter of Oddi, which is histologically the same as that in the animals which have a gall-bladder. It has been found, however, that in the animals without a gall-bladder the tone of the sphincter of Oddi is less, being less than 30 mm. in these animals and over 100 mm. of water pressure in the animals with a gall-bladder. The bile-secreting force is, however, the same in the animals with or without a gall-bladder.

The Cystic Kink—The cystic duct in man and in most animals forms a sharp letter S kink with the gall-bladder. In man this kink is aided in its obstructive function by the 4-20 leaflets, known as the valves of Heister. The upper two of these leaflets contain muscle fibers and extend two-thirds of the way around the duct. The cystic kink is such an efficient valve-like obstruction that either the gall-bladder or the common duct can be over-distended to bursting, without affecting the pressure in the other. This can be readily demonstrated at operation, where we find the gall-bladder non-compressible. If, though, we give it a slight longitudinal pull the gall-bladder readily empties. It was thought that bile from the gall-bladder was obtained in the Lyon's test, but Jacobson and Gydeson have proved it to be otherwise. They placed a bulb connected to a manometer in the gall-bladder and one in the common duct, and introduced substances into the duodenum. It was found

* Read before San Francisco County Medical Society, March 20, 1923.

that magnesium sulphate in the duodenum produced a flow of thin light duct bile through the ampulla of Vater, and caused a drop in the pressure of the common duct of about one-third, but no change in the pressure in the gall-bladder. Peptone did the same, but to a lesser degree. Four per cent hydrochloric acid caused at first an increase in the pressure of the common duct and then a prolonged decrease, but did not alter the pressure in the gall-bladder. Alkalies caused a prolonged increase in the common duct, but no change in the pressure of the gall-bladder. Magnesium sulphate was introduced into the duodenum after a colored dye had been injected into the gall-bladder, but none of the dye appeared at the ampulla of Vater. In the Lyon's test, then, we obtain common duct bile, and the gall-bladder is not affected. Clinically, the test has been proven unreliable, as shown by the extensive work of Cutler and Newton of Boston.

Let us think of the cystic kink as an obstructing valve between the gall-bladder and the duct system, which opens and shuts with the slight longitudinal motion of the gall-bladder, as would be imparted to it by the movements of respiration. This is surely a nice adjustment of nature, and it is probable that slight changes in the degree of formation of the kink, or of congestion of the mucous membrane, can too readily cause the kink to overact and so obstruct the gall-bladder. When an organ is obstructed it is an easy prey for bacteria. In cholecystitis is it not possible that an overacting kink may be primary and the bacteria secondary? Roentgenologists (George and Burnham) have found that when a patient with cholecystitis is placed in the right oblique prone position, the shadow by the X-ray shows an indentation by the gall-bladder of the duodenum. This has proved to be a reliable point in the diagnosis of cholecystitis and it is due to the tenseness of the gall-bladder, caused by the overaction of the kink. Does the infection cause the kink to overact, or are people with an exaggerated kink born to have gall-bladder trouble? Is it possible that indigestion disturbances can result from simply an overaction of the kink, without the factor of infection?

Storage Function of the Gall-Bladder—The gall-bladder seems unfitted for a simple storage function, as it contains from but an ounce to an ounce and a half of bile, and as over a pint and a half of bile is secreted in twenty-four hours, this is but an hour's secretion of bile. It holds but 5 per cent of the twenty-four hour's secretion, and when not distended about 1 per cent. Its musculature is quite inadequate for the function of a storage bladder, and its lining is so specialized that it is apparent that simple storage is not the function. The mucous membrane is built up into high delicate folds that give a tremendous surface to the gall-bladder. There must be a reason for this.

Function of Concentration—Common duct bile is quite different from bile obtained from the gall-bladder. The latter is darker, thicker, contains more mucous and bile salts, and the specific gravity

is greater. It is found to be from six to ten times more concentrated than common duct bile. If the common duct be tied off above the cystic duct, the bile obtained from the duct above the ligature will be found to be thin and to contain no pigments. If, however, the common duct be tied below the cystic duct, it will found later to contain thick, syrupy, tarry bile. The gall-bladder has concentrated it and by absorbing water has relieved the secreting force of the liver from excess of pressure. If Dakin's solution be injected into the blood stream, it will be found that at autopsy the gall-bladder stands out in contrast to the other organs, red and inflamed. This again suggests the concentrating action of the gall-bladder.

If a catheter be introduced through the ampulla of Vater up into the gall-bladder and potassium-sulpho-cyanid be introduced through it into the gall-bladder, it will be found that when ferric chloride is applied to the surrounding tissues the Prussian blue color will appear in the lymphatics and lymph glands that drain from the gall-bladder. Besides this ability to absorb water and inorganic salts, it is probable that the gall-bladder absorbs cholesterol, as it was found that in rabbits from which the gall-bladder had been removed the amount of cholesterol in their blood was one-third less than normally.

Just as an automobile has a condenser attached to the radiator, in order to conserve its water, so the gall-bladder returns to the blood stream water, inorganic salts and cholesterol that have been secreted by the liver. Such a function, however, seems unnecessary when we consider that the colon has a far greater action of absorption, and so can easily compensate for the loss of this function in the gall-bladder. Concentration of the bile must favor the formation of stones. If the gall-bladder concentrates the bile ten times it is possible for it, even with its small size, to act as a storage organ.

Through the action of a hormone associated with the production of acid chyme, the height of the flow of bile comes as the chyme leaves the stomach. There is, however, a lesser continuous secretion of bile between meals, much of which can be taken up by the gall-bladder and there reduced ten times in volume and stored. Of the various functions of the gall-bladder, such as regulator of fluctuations of duct pressure, storing of bile, condensing of bile, and the production of mucous, all can be readily compensated for after a cholecystectomy by the other organs.

ETIOLOGY

Clinically, cholecystitis has been found to follow infection of organs of the portal system, such as typhoid, appendicitis, ulcer, megacolon, colitis, and suppurating hemorrhoids. With it is found in most cases hepatitis, not only generalized through the liver, but developed to a greater degree in the neighborhood of the gall-bladder. Pancreatitis is found associated with cholecystitis and choledochitis.

Theories of Manner of Infection—Considering that gall-bladder infections usually follow infections of those organs that drain into one certain

vein—the portal—and that the blood of this vein has no direct course to the gall-bladder, it seems hardly likely that embolic infection of the gall-bladder takes place from the general blood stream, as in the Rosenow theory. It is more plausible that the infection carried to the liver by the portal blood reaches the gall-bladder by some anatomically more direct route.

It is well established that the liver receives bacteria from the portal system, and either kills or attenuates them. Sections from an area of hepatitis show periportal inflammation, in that about the portal radicals we find round cell infiltration, lymphocytosis, leukocytosis, vacuolation and atrophy of liver cells and deposits of pigment. Pieces of liver, taken from cases of acute appendicitis, have been examined histologically and have been found to show acute periportal inflammation.

It is not probable that bacteria infect the gall-bladder by the way of the ducts from the duodenum. The duodenum can be filled to bursting without injecting the ducts. Infections ascending against an outward flow are uncommon in other parts of the body. It may be so that carmine particles introduced into the rectum were recovered from a biliary fistula, but in this case the normal direction of the flow was reversed. Graham and Peterman failed to infect the gall-bladder by merely infecting the bile within it. They concluded that, in order to do this, one of four other factors must be present; namely, stoppage of the cystic artery, stoppage of the cystic duct, injury of the wall of the gall-bladder or foreign body in the gall-bladder.

Granting that the liver excretes live bacteria in the bile and that these reach the lumen of the gall-bladder, we know that infection by this means requires some other aiding factor. The cystic kink may help. Many infected gall-bladders contain no foreign bodies, such as stones.

Recent experiments point to the lymphatic vessels as the carriers of infection from the liver to the wall of the gall-bladder. In cholecystitis frequently no bacteria can be found in the bile. In the gall-stones and especially deep in the wall of the gall-bladder, can be found usually the streptococcus and sometimes the colon or typhoid bacilli. Histologically, signs of inflammation are seen not so much in the mucous membrane as in the deeper coats, where the embolic infections have taken place. The wall of the gall-bladder is rich in lymphatics, which run to the liver and down along the ducts to the head of the pancreas, furnishing ample passageway for infection to follow. In over 80 per cent of infected gall-bladders we find a gross hepatitis in the immediate neighborhood of the gall-bladder and often extending two inches from it, indicating a to-and-fro infection between the gall-bladder and the liver. Prussian blue injected into the portal vein will be found to inject the lymphatics of the gall-bladder. Prussian blue injected into the wall of the gall-bladder injects the lymphatics running from it into the liver and running from the gall-bladder down along the gall-ducts and into the head of the pancreas. Ex-

perimentally, staphylococcus was injected into the portal vein. It was found that the wall of the gall-bladder was infected deeply and not into the mucous membrane and that there also resulted a hepatitis, a cholelithiasis, and a pancreatitis. The same bacteria were identified in these organs.

The gall-bladder is often a part of a generalized infection, such as appendicitis and duodenal ulcer. Ten per cent of duodenal ulcers are accompanied by cholecystitis. Simultaneous perforations of the appendix and the gall-bladder have frequently been encountered. Chronic pancreatitis is generally localized in the head of the pancreas, which is the part of the pancreas most connected by lymphatics with the gall-bladder.

From the present data, it is reasonable to believe that bacteria coming through the portal vein to the liver pass by the lymphatics into the gall-bladder wall, resulting in cholecystitis. From here they reinfect the liver, causing a local hepatitis, and by lymphatics also pass down the bile-ducts, causing cholelithiasis, and to the head of the pancreas, causing pancreatitis. A vicious circle is thus formed, which passes the infection back and forth between these organs. If the gall-bladder be removed, the chronic pancreatitis generally clears.

Pancreatic Aspect of the Sphincter of Oddi—It is probable that pancreatitis sometimes develops from a regurgitation of infected bile up the pancreatic duct, due to obstruction at the sphincter of Oddi. In such cases ball-valve obstruction at the ampulla of Vater has often been reported. From many dissections it was found that in only 4.5 per cent of cadavers is the anatomical arrangement of the pancreatic and bile-ducts so that an obstruction at the sphincter of Oddi can cause a regurgitation into the pancreas. Yet we find chronic pancreatitis associated with 7 per cent of infected gall-bladders and 28 per cent of infected common ducts.

In the goat, an animal in which the pancreatic duct joins the common bile-duct above the ampulla of Vater, Mann tied the common duct below the entrance of the pancreatic duct. In these animals, though all showed slight pancreatitis, none showed acute hemorrhagic pancreatitis. When bile was injected with a syringe up the pancreatic duct acute hemorrhagic pancreatitis developed, but in this case pressure was used, which must have resulted in trauma to the pancreas. When the same experiment was repeated, using instead of the syringe method a pressure of 500 mm. of water, no acute hemorrhagic pancreatitis developed. In these experiments normal bile was used. Infected bile, however, acts differently. When this is injected up the pancreatic duct, even under normal pressure, acute hemorrhagic pancreatitis develops.

It, therefore, would seem that the advisable treatment for acute hemorrhagic pancreatitis is cholecystectomy, drainage of the bile-ducts, and an evulsion of the sphincter of Oddi. This latter has been found to give the most lasting reduction in the pressure of the common duct, and more so than does merely cutting the sphincter.

CARDIAC DECOMPENSATION DURING PREGNANCY AND LABOR *

By K. L. SCHAUPP, M. D., San Francisco

The frequency with which cardiac disease has been diagnosed during pregnancy and the infrequency of serious decompensation at the time of labor were the factors stimulating this paper. It is purely a preliminary report based upon our work at the Women's Clinic of the Stanford Medical School during the past three years.

In obstetrical examinations, a thorough survey of the heart and circulation is just as important as pelvimetry. It is necessary not only to know whether or not there is cardiac enlargement or whether there is insufficiency or stenosis of any of the valves, but a very clear picture must be presented as to what may be expected of any individual heart if put through a period of stress.

Heart-murmurs are very common, as anyone knows who does many routine examinations. Especially common is a transient murmur which appears at the base over the pulmonic area, but from which we have never yet found symptoms. From this type on there are many kinds of murmurs and many degrees of each type.

It is fortunate that even when a diagnosis of a definite organic lesion has been made, we do not often find the heart showing signs of decompensation, but we must ever be on the alert to the knowledge that it may occur at any time, and we must not be taken by surprise.

The history of previous cardiac disease with decompensation during pregnancy and labor is naturally important, but must not be taken as positive evidence that it is going to occur again. Nor is the fact that the patient with a well-marked lesion but who has never had a break in compensation, any assurance that such a break may not appear at this time. We find that there is no regularity with which we can prognosticate the probable course of events without careful intensive study. Some patients have marked symptoms in one pregnancy and in several subsequent ones seem perfectly normal. In one case of this series the patient had had mild signs of decompensation ever since an attack of inflammatory rheumatism at ten years of age, and when seen early in her first pregnancy showed such definite signs of danger that termination of the pregnancy was considered. She improved, however, as the pregnancy progressed and at labor was perfectly normal and, except for the presence of a systolic murmur and slight enlargement of the heart, one would not have known that there had ever been a lesion.

Another patient had always been well until her first pregnancy, when she had a severe decompensation. Following this there were three normal pregnancies without symptoms. With the fifth she came under our care with a marked decompensation and active endocarditis. This

woman delivered spontaneously, but sank rapidly and died on the fourth day.

The heart that is not compensating presents an individual problem during pregnancy and labor. Under normal conditions of health it is resilient and adapts itself quickly to varying demands. The types of lesions met with are the same as at any other time and the resultant symptoms are naturally also the same, but are accentuated by the added work that is thrown upon the circulatory system during this period. Nausea, poor nutrition, and the elimination of toxins or waste products of the embryo throw an added burden on the heart early in pregnancy. Later, the increased vascularization tortuosity of vessels and the mechanical embarrassment of the growing uterus increase the load. During labor the actual work performed by voluntary and involuntary effort, the increase in blood pressure and accelerated pulse rate cause the greatest strain. Lastly, the sudden emptying of the uterus at the end of the second and third stages may, by splanchnic dilatation, cause shock and dilatation even after several hours.

The necessity of close supervision to forecast the probable effect of pregnancy and labor upon the cardiac pathology is evident. All patients who have been found to have a heart lesion need to be closely watched. This means careful questioning for signs of early decompensation, frequent reading of the blood pressure, and careful examinations of the heart, as well as urine examinations.

Where signs of the break appear, medical advice should be asked as soon as possible and treatment begun. The treatment naturally is the same as for the same type of lesion uncomplicated by pregnancy. Where consultation is called there should be the utmost co-operation to determine the effect of each condition upon the other. Happily, where this co-operation exists we can feel reasonably safe, for the approach of the point of danger will have been recognized and the pregnancy terminated before the break.

Here we must make a careful survey of the apparent cardiac reserve and balance it against the remaining work that we know must inevitably be thrown upon the heart. Should there be no improvement after a reasonable period of intensive treatment, termination is indicated and the sooner it is done, the better the prognosis. If, however, the patient is in a grave condition when first seen, it is better to be conservative and try to gain a little ground before attempting any operative procedure. There are times when the decompensation is so grave that we are sure that even a small burden added to the already heavy load will cause fatal termination.

In 1395 pregnant patients seen during the last three years in the Stanford Women's Clinic and the Stanford Obstetrical service at the San Francisco Hospital, cardiac disease, other than functional murmurs, was diagnosed thirty-eight times. Mitral insufficiency was most common, occurring 18 times; mitral insufficiency complicated with

* Read before the Section on Obstetrics and Gynecology of the Medical Society of California at Yosemite National Park, May, 1922.

stenosis was observed 6 times; endocarditis, 5; mitral stenosis, 3; myocarditis, 2; aortic stenosis, 2; aortic insufficiency and aortic stenosis with insufficiency, each once. Myocarditis and endocarditis presented the most serious complication. Both patients suffering from myocarditis showed a marked break, and both were delivered operatively. Of the five patients with active endocarditis, all had symptoms and four were terminated operatively, while the only one allowed to go through spontaneous labor was the one who subsequently died. Of three patients with mitral stenosis, two had symptoms and were assisted at labor. In mitral insufficiency, the most common lesion, symptoms appeared in eleven cases, but they were in most part mild, only four coming to operation. Of the aortic lesions, none turned out to be serious.

Of the 38 patients with decompensation, 23 had albuminuria and 4 had casts, 19 had dyspnoea, 17 palpitation, 14 cough, 14 edema, 13 pain, and 4 had irregularity of pulse. While dyspnoea was the most common symptom, it was usually present in a moderate degree and with palpitation and slight edema was often the only sign of decompensation. In the more serious cases, however, cough and pre-cordial pain were the most constant symptoms and were often very difficult to control. It was in the cases of coughing and pain that we found the gravest decompensation, and here interference was more often necessary. Irregularity of the pulse, while not frequent, was almost always associated with a serious lesion. The time of appearance of symptoms varied, but in most of the twenty-four that occurred ante-partum they began after the sixth month, and of these the majority appeared during the last six weeks. In one, symptoms occurred almost with conception in three different pregnancies, and with each grew worse.

Five patients who were known to have cardiac lesions, but in whom there had been no signs of decompensation, decompensated after labor in varying degrees. One had acute dilatation. There was only one who had marked signs intra-partum, and this was the patient with endocarditis, who died on the fourth day. It is remarkable to note that with the number of severe cases treated ante-partum, all but this one stood the test of labor or some operative procedure unusually well.

An important point brought out in this investigation was the relation of the blood pressure to decompensation, and it may be an important factor in prognosis. In nearly all cases on returning compensation the blood pressure shows a rise, even in cases where it already was above normal. In one case it went from 98/60 to 132/70, in another from 95/50 to 114/70, and in a third from 130/85 to 145/88. Many such instances can be quoted. In one case of acute dilatation, the pressure dropped from 128/80 to 50/? and then came back to normal as compensation returned. In the fatal case, the pressure was 128/88 on admission two weeks before delivery, and it gradually fell. In another patient where the break was so bad that we felt that she would not survive delivery,

the pressure with returning compensation came up to 156/108. At about this point, further treatment was refused and the patient went home, to return in about a week as bad as ever and with a pressure of 120/80. After a week of treatment the pressure read 142/90 and there had been so much improvement that a Voorhees' bag was introduced and the pregnancy terminated by version and extraction. This procedure was entirely successful and the patient went home markedly improved.

The stage at which interference should take place is dependent upon the time at which the symptoms occur, the severity of the symptoms and whether or not there is a tendency toward returning compensation. If symptoms occur early in pregnancy and show tendency toward gradual increase in severity, in spite of treatment, the pregnancy should be terminated at once. If, however, there is improvement a watching policy may be adopted, for in almost all patients there is sufficient warning of the impending break.

Where symptoms appear suddenly during the later months and are severe the problem becomes more complicated, for treatment attempted at the time of the initial break may be just as serious as the disease.

When the time for interference has arrived, the safest method of procedure must be chosen. This depends upon the time in the pregnancy, the stage of labor and the parity of the patient, as well as upon the type of heart lesion involved.

The means must be the one with the least attendant strain or shock in accomplishing its purpose, and greatest care is necessary in its selection. In active endocarditis, especially where there are lung signs, the anaesthesia necessary for Caesarean section may be more serious than the cardiac disease. In mitral stenosis, with insufficiency and muscle change, the long process of dilatation and expulsion is far more serious than a Caesarean section under nitrous oxide and oxygen. Where there is marked edema of cardiac origin and passive congestion, such a procedure as manual dilatation of the cervix with version and extraction, may increase the danger, for the traumatization to pelvic vessels in even a slight degree may be the origin of a pelvic thrombosis with embolism, made possible by the venous stasis. If delivery is by the vaginal route and the head presents, it seems best to deliver by forceps as soon as dilatation is complete. This is best accomplished under nitrous oxide and oxygen after episiotomy, where the perineum is resistant and has in its favor that it shortens the labor perceptibly, and if properly done gives a minimum of shock.

Procedures other than the use of forceps in this group, were used as follows: Caesarean section, four times, twice for mitral stenosis and insufficiency, and once each for myocarditis and mitral insufficiency; Voorhees' bags were used five times, three times in mitral insufficiency, and once each for myocarditis and endocarditis. Three abortions were done after consultation with the medical

staff, and three patients were sterilized. In only one instance was manual dilatation done.

CONCLUSIONS

1. Cardiac decompensation during pregnancy is not uncommon.
2. Serious decompensation at the time of labor is rare.
3. Persistent cough and precordial pain are the most constant symptoms in grave decompensation.
4. The frequent reading of blood pressure during pregnancy complicated by cardiac failure is a valuable aid in choosing a time for interference with the pregnancy.
5. Lesions involving muscle change, or active infection of heart-valves are the most serious at labor.
6. Patients whose symptoms do not improve under treatment should have the pregnancy terminated.
7. Interference to shorten the labor of all cardiac cases is justifiable after the first stage has been completed.

DISCUSSIONS

Armstrong Taylor, San Francisco.—Dr. Schaupp has read a paper on a subject in which we are all deeply interested; a subject that is recognized many times and I believe more often not recognized. Dr. Schaupp kindly allowed me to look his paper over a few days ago and rather than discuss his paper at random, I have made notes on it. In discussing the paper, I wish first to emphasize the great importance of regular routine examinations during pregnancy. It has always been a difficult problem to decide when a patient is fit to undergo pregnancy. Even with a mitral stenosis, which is considered a very serious complication, many have gone through several pregnancies and in a subsequent pregnancy the most serious symptoms of a decompensation have occurred. These decompensations usually occur late in pregnancy and prognosis in such a case as this is always extremely doubtful. The prognosis is usually good as long as compensation is regained. It is not advisable, however, for these mothers to undergo the severe strain coincident to pregnancy. The myocardium should be the determining factor in all these cases. A patient with fairly good compensation should be under close observation during the entire pregnancy and I believe that at the first sign of a break some operative procedure should take place. A valvular lesion, I believe, when there is no decompensation and a reasonable amount of exercise does not change the condition of the patient, she should be allowed to go through her pregnancy and the chances are that she will go to term without any break in compensation. On the other hand, when there is a marked decompensation and the patient is cyanotic with marked edema and pulmonary congestion there should be no hesitancy in emptying the uterus. The next point that I want to call your attention to embraces those abortions in patients having a mitral lesion and where there have been repeated hemorrhages. In that particular instance, had we examined the patient carefully we would have found a high blood pressure and if that patient had been watched very carefully, with prolonged rest, the proper elimination and the right diet, I am positive that many of our abortions that are classed merely as abortions, brought about probably as we say through accident or some other reason, but which are due possibly to these mitral lesions, might have been prevented. I do not agree entirely with Dr. Schaupp in the statement that he makes, that possibly Caesarean section is advisable in a large

percentage of these cases. It may, and it possibly is, a procedure that many times we are compelled to take when the patient is in an alarming condition. It is possibly the only reason for it, but there are many of these cases when the parts of the birth canal are very soft and edematous, dilatation with the bag and delivery immediately with forceps will probably cause the patient less strain than a Caesarean section. I would like to call your attention to a case that occurred recently and was sent to the San Francisco County Hospital. The history of the case and what we found at autopsy will probably give us a better idea of the pathological conditions that may be found in these cases. The patient was a para five and was sent to the hospital with a diagnosis made on the outside, of active tuberculosis. When we saw her she was very cyanotic. There was edema of the lungs and she was in a very critical condition. Dyspnoea and all the symptoms that you naturally find in a lobar pneumonia were present. She was put upon the table and spinal anaesthetic was used and she was delivered very promptly. The delivery caused very little strain and I am sure that there was very little stress occasioned during the delivery. The patient was taken to a ward room and appeared to be in a better condition than when she went on the table. One hour after delivery her condition was alarming. She sank very rapidly and died in about two hours. The findings of the autopsy were very interesting. There was a chronic endocarditis with a marked stenosis and edema of lungs. There was no tuberculosis and the lung had exactly the appearance of what we found during the influenza period, with the exception that there was none of the sero-sanguinous fluid present. I think that with proper care if these cases are watched from the beginning of pregnancy, no matter whether the lesion may be functional, as we often find, or whether it is a mitral stenosis, a cardiac decompensation or a myocarditis, without a doubt 75 per cent of them could be carried through to full term.

G. Carl H. McPheeters, Fresno.—I would like to emphasize the point that Dr. Schaupp makes in regard to blood pressure estimations. I have found in my experience that what he cites is quite correct. The blood pressure estimations made with regularity are especially important in cases of pregnancy which apparently have heart lesions of any kind.

K. L. Schaupp, San Francisco (Closing).—I am sorry that I did not make myself clear because the impression that Dr. Taylor received from what I said is not what I meant to say. I do not believe that we should do a Caesarean Section unless there is no other way. Caesarean section seemed to be the least serious procedure in the cases cited. I do not believe that anyone can tell you at any time what should be done in any particular case and that is the reason I lay stress on the point of medical consultation to determine just how much the heart can stand. In the case of the patient who died, the medical men advised Caesarean section quickly under nitrous oxide and oxygen which we opposed, because, as she had rales in her chest and signs of fluid, edema and dyspnoea and she could not lie down, we felt that the quickest way to kill the patient would be to give her any kind of an anesthetic. We thought to put in bags or to hasten the last stages of labor for her. It was her fifth baby and premature labor set in; she called an interne only when she was having severe pains. The baby was born spontaneously with the minimum of shock and strain before anything could be done. She seemed very much better at once and then suddenly began to sink. She died on the fourth day. The post-mortem examination, I think, justified our opinion in not doing a Caesarean section. It showed that there had been an old valvular lesion of the heart. The vegetations were active and there were small infected emboli in the lungs. There was a thrombosis in the pelvic vessels. There was minimum shock, no damage done by natural force of labor and yet the cause of death was pulmonary

embolism. I think if we had done a Caesarean section at that time it certainly would have resulted in earlier mortality. I sum up, in concluding, that each individual case needs its own individual study and careful consideration and sometimes when you have marked edema of the abdominal wall, as Dr. Taylor said, a Caesarean section is not wise. It means simply to be watchful throughout the pregnancy to see what the heart is doing and try to know what it can do when a strain is put upon it. A murmur is nothing, but you should be on your guard. You should see the patient more often and inform yourself about her general condition with the cardiac point in view. When she begins to show signs of decompensation, put her in bed and try to get her heart into better shape before anything is done.

(Stanford Medical School, Sacramento and Webster streets, San Francisco, Calif.)

THE PHYSIOLOGIC BASIS FOR THE EMPLOYMENT OF CALCIUM IN THE TREATMENT OF ASTHMATIC PAROXYSMS *

By F. M. POTTENGER, M. D., Monrovia, Calif.

Asthma has always been one of the enigmas of medicine, but with increased knowledge a solution of some of its problems has already been found and others are on the way to solution.

The greatest advance in etiology is the proof that asthmatic attacks may be superinduced by substances to which the patient has become sensitized. This fact, however, must not be considered as a complete solution of the problem of etiology, but must be taken for the suggestions which it offers for further study and research.

Analysis of phenomena which are recognized as being due to hypersensitiveness, particularly such clinical entities as urticaria, eczema, hay fever, and asthma, show that individuals subject to these conditions often belong to families in whom other members have the same tendency, and, further, that the tendency often manifests itself during the early period of life. Again, patients who suffer from one of these affections often suffer from more than one, and show such other symptoms as exaggerated oculo-cardiac reflex, bradycardia, hyperchlorhydria, and spastic constipation.

Of the older remedies for relieving asthma, antispasmodics were most generally used in such form that they could be burned and the fumes inhaled, or, if the attacks were too severe, hypodermics of atropin or morphin were resorted to. Adrenin has been used quite generally during recent years, and in most instances affords prompt relief from the paroxysm.

More recently clinicians, believing that most asthmas are due to a hypersensitiveness to some protein, have used great patience and wonderful ingenuity in working out the particular protein at fault in each case and then desensitizing the patient. When a failure to find a protein to which the patient reacts occurs, there is probably too much of a tendency to conclude that it is because

the particular protein has not yet been tried. There is gradually developing, however, as a result of these studies and observations, a belief that these hypersensitive reactions are not all specific, and a strengthening of an opinion formerly quite generally held that there is probably a group of asthmas which is due to causes other than specific sensitization to protein, such as reflexes from the nose, sinuses, intestinal and genitourinary tract, and from the lung itself, as we sometimes see follow healing in tuberculosis. The fact that asthmatic paroxysms are precipitated by changes in weather and by the inhalation of irritants calls attention to the reacting capacity of the patient as a factor of importance.

It seems to me that our advances in the understanding of asthma can be furthered most at this time by a better analysis of the patient who suffers from the affection. This conclusion is based on the data recited above.

The first important fact in studying the patient is that the anaphylactic reaction is one which expresses itself as a parasympathetic syndrome; and the second, that the essential condition present in asthmatic paroxysms is the bronchial spasm and the increased bronchial secretion, both of which are due to a hyperstimulation of the pulmonary branches of the vagus, which is the most important nerve of the parasympathetic system. Other symptoms such as dyspnoea, emphysema, and rapid pulse follow the bronchial spasm caused by increased vagus action.

Further evidence of the parasympathetic (vago-tonic) nature of asthma is furnished by the methods which have proved effective in relieving it, either general sedatives which take the tension off the nervous system as a whole, atropin which inhibits the vagus directly, adrenin which produces the same effect as though the sympathetics were stimulated and thus opposes the action of the vagus, or desensitization of the patient which relieves the extra stimulation of the hyperactive vagus (parasympathetic) system.

After arriving at the concept that asthma is a condition of hyperirritability of the pulmonary branches of the vagus, we are obliged to analyze further. The parasympathetic mechanism is not wholly an affair of the vegetative nervous system. What is going to happen when the nerves belonging to this or any system are stimulated will be determined not alone by their own state, but by the condition of the tissues upon which they act. Therefore, it is too narrow to view asthma as a parasympathetic syndrome in a strict neurologic interpretation of that term. We must conceive of it as being a disturbance in the whole neuromotor mechanism (including in this the secretory mechanism as well as the muscular).

Biochemical studies have established the important fact which clinicians are not sufficiently appreciating, that the cell itself determines largely its own action. Cells are made up of colloidal substances of which the phases differ greatly in different tissues and under different circumstances. These cells take up and give off various electro-

* Read before the Los Angeles Clinical and Pathological Society, February 22, 1923.

lytic ions during activity; in fact, this process represents a great part of cellular activity.

Now, it has been shown that certain electrolytes have a determining influence upon what action shall occur in a given tissue or organ; for example: stimulation of the vagus of an experimental heart is of no avail unless the perfusing fluid contains potassium ions (Howell). Of all the electrolytes present in the tissues, it seems that potassium, sodium, and calcium are most closely connected with the processes which are controlled by the vegetative nerves.

While it would be presumptive to assume to interpret the whole action of sodium, potassium, and calcium ions upon the human organism from the knowledge which we possess today, yet there are facts known which are of great importance in the discussion of the subject before us. I shall leave much of this discussion for a future communication, but wish to mention here that a relative increase in potassium in the cells causes an action similar to that of stimulation of the parasympathetic nerves; for example: it strengthens the diastole in the heart and causes contraction of the musculature and an increase in the activity of the secreting glands of the intestinal and bronchial systems. Calcium, on the other hand, if relatively in excess, causes a reverse action similar to that of stimulating the sympathetic nerves. Sodium alkalizes the tissues and at the same time produces in some structures action similar to that of potassium. The action of calcium and potassium ions on the cells shows the same general antagonism in action that belongs to the sympathetic and parasympathetic components of the vegetative nervous system, and we must look upon them as being an essential part of the neuromuscular mechanism in all vegetative activities.

The extended concept of the patient's reaction during paroxysms of asthma then implies that these reactions are an expression of a hyperactivity of the vagus-potassium system, and offers a further point of attack for therapy. Whether this is actually a hyperirritability of the sympathetics and a lessening of the cellular content in calcium or a hyperirritability on the part of the vagus and an increase in the potassium content of the cell, I do not know, but that there is a *relative* hyperactivity of the parasympathetics and of the potassium content of the cells is evident, not only from the symptomatology present, but from the measures that are used to combat the paroxysms.

Throughout the entire enteral system, which consists of the gastrointestinal tract and those organs which are derived from it embryologically, the liver, pancreas, body of the bladder, and lungs, stimulation of the parasympathetics activates the musculature and secretory nerves, while stimulation of the sympathetics inhibits such action. In many of these tissues it has also been shown experimentally that a relative increase of potassium ions causes an increased activation, while a relative increase in calcium ions causes inhibition. Thus, calcium is definitely identified with sympathetic, and potassium with parasympathetic action.

Reasoning from this concept of the neurochemical control of activity in the bronchial tissues, I recently tried to relieve the paroxysms in a severe asthmatic by producing a relative increase in the calcium content of the body cells. This patient (a woman, age sixty-five years) had had symptoms of asthma for more than a year, and the paroxysms had become very severe and frequent during the few weeks preceding the time this experiment was tried. The patient was markedly dyspneic and cyanotic, and the heart was dilated. The remedy was given in the form of the chloride in doses of 5 cc. of a 5 per cent solution, intravenously. After the second dose, which was given two days following the first, improvement was noted, and after three doses she was entirely relieved of paroxysms.

Three other cases were then put upon the same treatment. In each of these cases we have been able to completely relieve the paroxysms. One, however, proved to be very stubborn, but we finally succeeded in relieving him fully. This patient suffered from such severe paroxysms that he had taken as much as 7 cc. of adrenin in twenty-four hours, and had continued from 1 to 7 cc. per day.

It is evident that dosage will have to be studied carefully, and adapted to each individual in order to attain success. We felt that it was not best to start with doses larger than 5 cc. of a 5 per cent solution, but we later found that 10 cc. was more efficacious at times. In administering calcium chloride intravenously, the remedy should be given very slowly. Four or five minutes should be taken to give 5 or 10 cc. of this solution. Symptoms, such as flushing of the face, a feeling of heat, perspiration, constriction in the throat, and sometimes tension in the rectum are often noted by the patient. These symptoms, so far, have all been mild in character, and have soon passed away. They are minimized by the slow administration of the remedy.

After more experience with dosage, we feel hopeful that we may be able to give quicker relief to the paroxysm. This method of treatment should be carried on in conjunction with adrenin, the latter for its immediate action, the former for its more lasting effect. After once relieved, all patients have so far remained free from paroxysms, the time varying from three weeks to three months. After relief was attained we repeated the injections once or twice at five to seven-day intervals.

Calcium has been suggested in the treatment of asthma before, but so far I have failed to find a discussion of the scientific basis for its employment. It has been used in an empirical manner, and so has failed to secure the recognition which its importance warrants.

There are many interesting questions which suggest themselves as a result of this work, which I shall not discuss in this preliminary report, but leave for a future communication.

BRAIN INJURIES, MECHANICS, PROGNOSIS, AND TREATMENT *

By EDMUND BUTLER, M. D., San Francisco

The bones in the human skull are so arranged that the shock of an ordinary injury is well absorbed before the force can be transmitted to the brain. The frontal, mid-parietal and occipital regions bear the brunt of ordinary sublethal injuries. Here the bones are constructed to stand up under greater strain than other contiguous areas, and the portions of the brain that lie in contact with the skull opposite to these areas are less highly organized. The skull, as has often been described, has six perpendicular reinforcements, one corresponding to the mid-frontal region, one corresponding to each external angular process, one corresponding to each of the mastoid regions and one corresponding to the mid-occipital region.

Fractures of the vault are usually directed to the base by one of the thinner portions of the skull, bridging between these reinforced areas. The greatest distance and the thinnest portion of the skull bridges between the external angular process and the mastoid on either side. Thus, more fractures will be directed to the middle fossa. The reason that the posterior fossa has such a large percentage of fractures, some statistics giving a greater percentage of fractures for the posterior fossa, is that great force is often transmitted to the condyles of the occipital bones through the vertebral column. Often short linear fractures are found on either side of the foramen magnum of the occipital bone, but, as a rule, fractures of the posterior fossa communicate with fractures of the middle fossa.

Traumae producing brain injuries may be divided into two types. First type, the injuring object is moving and strikes the head, which is more or less stationary; for example, falling bricks, falling lumber, falling telegraph poles. In this type the injury to the brain is direct and corresponds to the cortex of the brain in immediate contact with the portion of the skull struck. The amount of direct injury being in direct proportion to the amount of force. In the second type, the head is moving and strikes some stationary, or nearly stationary, object. The best example of this type is the person struck by an automobile, the head is slammed against the pavement or curbstone; or the man that is thrown from an automobile, striking head against a tree, a fence-post, or the pavement. In this type there is a certain amount of direct injury to the brain corresponding to the area of impact, but far greater cortical destruction takes place on the opposite side of the brain. This is the contre-coup injury we hear so frequently spoken of. In this type the physical signs usually point to the contre-coup injury as the more extensive. In this type there are always some changes produced in the brain tissue, between the direct injury and the contre-coup injury. These changes varying from a slight agitation of the parenchyma of the brain followed by slight

edema, to comminution with multiple hemorrhages and complete destruction. These two types of injuries may be combined; for instance, a man may have a direct injury knocking him unconscious, then he falls to the sidewalk, striking head and producing another fracture with direct and contre-coup brain injuries.

All of the above-described brain injuries may take place without any fracture of the skull. The absence of fracture does not change the prognosis or treatment. Brain injuries with and without fracture of skull are treated the same. Those injuries without fracture are just as serious, and often more so, than those accompanied by fracture. The usual picture at autopsy in these cases without fracture is a wet brain, convolutions flattened, with varying degrees of direct and contre-coup destruction and hemorrhage. Coronal sections show the brain to be studded with petechial hemorrhages, and the cut surface looks pale and waterlogged.

Seven hundred and fifty-five cases of brain injury, diagnosed as fracture of the skull, have entered the San Francisco Emergency Hospital during the last two years and a half.

Thirty-eight and five-tenths per cent resulted from persons being struck by automobiles; 24.2 per cent from falls from buildings, scaffoldings, and swings; 9.9 per cent from persons being struck by street-cars; 9.6 per cent from collisions between automobiles; 3.9 per cent from being struck by falling bricks; 3.4 per cent from fights; 2.85 per cent from street-car accidents; 2.85 per cent from motorcycle accidents; 2.85 per cent from causes unknown; 1.07 per cent from holdups; .7 per cent from automobile street-car accidents.

Since the type of brain injuries received depends upon the character of trauma, the history is very helpful as a guide in the prognosis. It is one of the important means we at times have in differentiating post-epileptic stupors, morphine poisonings, with old or recent scalp injuries, from fractured skulls with brain injuries.

A prognosis depending upon observations made while the patient is in primary shock is very apt to be unreliable. It is also very difficult to prognose upon the findings of one examination. The course of the pulse, temperature, blood pressure, spinal fluid pressure, the rapidity of the changes and disappearance of reflexes, the appearance of pathological reflexes, are of the utmost value in making a prognosis and outlining treatment.

Aids to Prognosis—Head injuries in the old are very serious. The sutures are very rigid and the blood vessels are of such a character that any concussion of the brain results in edema. Infants and children after recover from very extensive fractures of the skull with phenomenal rapidity. Hemorrhage from the ears and the nose is not an unfavorable sign. Such cases get along better than those of apparent equal severity without hemorrhages from ears or nose. A return of coma eight to fourteen days following such injuries, absence of the brain is often the etiological factor. If the pulse does not come down following the usual treatment for shock, the prognosis is grave.

* Read before Fresno County Medical Society, January 2, 1922.

In all cases where the pulse and temperature begin to climb very soon after the accident, a favorable outcome is rare. Dilated pupils that do not react to light after time has been allowed for subsidence of shock are a very unfavorable sign. Cases that show early signs of cerebral compression usually go on to an early death.

The blood pressure must remain higher than the intercranial pressure; thus, if the blood pressure drops below the intercranial pressure death is imminent. This crisis is manifest by rapid pulse and falling blood pressure, or, as Steward of St. Louis puts it, "When the rate of pulse exceeds the systolic blood pressure registered in millimeters of mercury." This crisis usually takes place several times during the development of cerebral compression. If the regulatory centers of the blood vascular system are not affected, the period of lowered blood pressure will be very short, but as the intercranial pressure becomes excessive, there comes a time when a greater rise in blood pressure is impossible. Rapid pulse, Cheyne Stokes respiration, are the result of this final crisis. The character of the scalp injury is of very little value as a guide to the severity of the brain involvement.

The most valuable localizing sign as to the side of the compression and the degree of compression, in my experience, has been the condition of the pupils. The pupil on the side of the beginning compression at first reacts very sluggishly, often showing a hippus. As the compression increases this pupil slowly contracts, reacting at first, later pin-point and fixed, finally dilating slowly, followed by the same course of events in the other pupil.

The primary treatment in all cases of brain injuries is complete rest in a quiet, dark room, with head and shoulders slightly elevated, ice-cap to head, heat to extremities. Following the subsidence of primary shock, a careful examination must be made and full notes taken. Radiographs are valuable, but a shocked patient must not be moved just for a radiograph. Following the primary examination, the case must be observed frequently and notes made upon the character and rate of the pulse and respiration, character of the mentality, degree of stupor, the presence or absence of convulsions, the movements of extremities, the blood pressure, reflexes, and, in doubtful cases, the cerebral spinal fluid pressure. For the relief of headaches and slight degrees of intercranial pressure, the removal of cerebral spinal fluid is sufficient. The administration of salol coated, sodium chloride pills for the relief of these pains has been efficacious in some cases (W. Hughson, December 10, 1921, J. A. M. A.).

When Should We Operate?—1. Operation is indicated in depressed fractures, after shock has subsided. (2) Any case of increasing cerebral compression, regardless of whether it is due to extradural hemorrhage, intradural hemorrhage or parenchymatous edema, if the same is not controlled by cerebral spinal puncture and the administration of hypertonic solutions by rectum or sodium chloride pills by mouth. The greatest number of cases that

could be helped by surgery, that are overlooked, are very slow-forming extradural hemorrhages that begin to manifest themselves at the end of the second or third day. About 10 per cent of all fractures have sufficient extradural hemorrhage to cause death, and over 50 per cent of this 10 per cent go undiagnosed because of the lack of frequent observation and inattention on the part of somebody.

Operation is not indicated—(1) in brain injuries so extensive that all reflexes superficial and deep are suspended. (2) When the pulse is above a hundred, if the rapid rate is due to shock alone, given time it will slow down and then operation may be performed if indicated; if due to destruction of brain or rapidly increasing intracranial pressure, the pulse continues to go up and any operative interference would only hasten the end. (3) When all the signs of cerebral compression develop very rapidly; for example, in the first hour. (4) Medullary edema manifesting itself very soon after entrance into the hospital by rapid pulse, shallow respiration, and a rapidly rising temperature.

(Butler Building.)

Lay Medicine—Every faith, cult, system of thought, institution of learning or systematized organization wanes in the success of its activities and undergoes retrograde changes unless protected from those influences which make for lessened efficiency and intrinsic worth. Organized religion finds it necessary to adopt measures varying with the needs of the time to preserve the purity of its doctrines and prevent their overthrow or obliteration by the inroads of heresy and schism. The dominant thoughts of national character and politics, unless kept fresh by frequent review and the recollection of salient factors, and lessons learned by history soon change and are perverted into the means of anarchy with resulting harm to peoples and the lowering of the social level of posterity. So also does the torch of true learning become uncertain in its light as a guiding beacon, its bright, clear flame, smoky and dim, will no longer be accepted by peoples as their star of hope in matters medical and hygienic, if it is no longer fed with the fuel of sound, sensible and sane thought and the hand that holds it strong, firm and unshaking.

The torch of scientific medicine, thanks to the combined efforts of many, if not all branches of science, has risen from a murky fog of secrecy, doubt, nostrums and uncertainty and made clear the way for the solution of medical problems which with ever increasing knowledge have multiplied many fold until our information on many medical subjects is quite complete and satisfying. Until within a very few years it has seemed that the medical profession was not only the custodian of knowledge of matters medical but also the means of putting into practice the means of prevention and cure of disease. It was furthermore closely associated with allied subjects, all of which insured its position as a competent adviser of individuals and peoples, and made it as great as any of the learned professions. That a change in its status, a curtailing of its functions and a lessening of its usefulness as a leader of sound, scientific thought has taken place is evident to anyone.—Editorial, Rhode Island Medical Journal, April, 1923.

TREATMENT OF DIABETES *

By A. F. WILLIER, M. D., San Diego, Calif.

When one essays to present a dissertation, no matter how brief, on the topic of diabetic therapy, it is at least assumed that he possesses some special knowledge of the subject, which, in all probability, is the result of extensive observation or investigation. In this instance, however, such is not the case. I have incorporated here, with little of scientific value or true originality.

Diabetes is a disease which has a peculiar fascination for all who make a study of it. No malady, perhaps, in comparison with the number of individuals involved, has attracted as much attention. And while the riddle of diabetes is far from being solved, recent and present studies made upon it have been of great value in throwing light upon many of the intricate processes going on in the body, and have brought about improvement in the treatment of the disease itself. While it is true that diabetes is a chronic disease, unlike cancer or rheumatism, it is painless; unlike tuberculosis, it is clean and not contagious, and in contrast to many skin diseases, it is not unsightly. Moreover, and above all, it is amenable to treatment, and the downward course of the patient can usually be checked. It has already been shown that a number of these chronic patients have lived longer than would have been expected of them had they been normal, healthy people. For the diabetic, this is a demonstration and a challenge. While the underlying cause of diabetes is usually considered to be a derangement in one of the functions of the pancreas, strangely enough the secretions of this gland, which are capable of digesting all kinds of food, usually remain undisturbed in this disease. The fault with the pancreas, in diabetes, concerns that function of the gland which regulates the body's use of sugar, formed from the food. There is probably an interference in the manufacture of a special ferment or internal secretion, which is usually discharged into the blood.

The comment is frequently made that diabetics live for years, with little inconvenience to themselves, even though strict rules of diet are neglected. While this may be a consoling thought to a weak-willed patient, if the average diabetic yields to such seductive advice, the probability is overwhelming that he will later pay the penalty—and in full. While such statements are untrue, their origin probably lies in the favorable course of the large number of mild cases; but it is ever folly to disparage the strength of the enemy, no matter what the conflict be. How serious in the past diabetes has really been and at the same time how much the methods of treatment have improved during the recent years, are best shown by the statistics of the Massachusetts General Hospital, where the percentage of mortality has fallen from 28 per cent to 4 per cent, from 1900 to 1918. Joslin shows a still smaller percentage, his death rate in the past ten years falling below 2 per cent. This is a remarkable record when it is re-

called that diabetes was at one time considered an incurable disease. The improvement may be attributed to newer methods of treatment; more accurate tests in estimating the severity of the acid poisoning; the preliminary omission of fats prior to any change in the diet; and, lastly, the omission of alkalies. The study of diabetes is of greatest interest to the student of dietetics, for it is by the regulation of the diet that the diabetic's life is made more comfortable and his days prolonged. The treatment lasts through life. The co-operation of the patient must be secured by explaining the importance of it. He must be taught the nature of his disease and how to conquer it; in other words, he must be made to understand that he is really taking a course in diabetes. He must have a fair knowledge of the nutritive and caloric value of the carbohydrates, proteins, and fats, since his disease is a condition in which the normal utilization of carbohydrates is seriously impaired. He must be made to understand that his malady is usually due to overeating, since 80 per cent of diabetics show obesity. He should be encouraged to make regular visits to his physician, to present information concerning his daily urine, weight, diet, blood pressure, and perhaps the blood itself. A note-book, kept by the patient, serves to keen his interest and raise the efficiency of his visits to the medical attendant. Any agency which promotes physical or mental hygiene is a step toward the prevention of diabetes in the predisposed, and the abatement of its severity in those who have acquired it. Patients should be encouraged to take long walks outdoors, go on camping trips, and relax from business worries as much as possible. Besides the good effect of the exercise, in the improved circulation and general well-being, the patient can add more carbohydrate to his diet, which means more comfort. Regular hours of sleep are imperative. Proper clothing should always maintain sufficient body heat. Mental diversion is desirable, but anxiety is harmful. Heavy responsibilities should be avoided, but the mind should be occupied and cheerfulness ever cultivated.

The nutritive value of all food depends upon the quantity of carbohydrates, protein, and fat which it contains, one gram of carbohydrate and protein producing four calories each, while one gram of fat produces nine calories; one gram of alcohol yielding seven calories. The ordinary diet for a man at moderate physical work would contain 100 grams of fat, 100 grams protein, and 400 grams carbohydrate. This would amount to 2900 calories in the twenty-four hours, or about forty calories per kilo for an individual weighing seventy kilos or 154 pounds. It is readily seen that more than 55 per cent of the energy of the average individual consists of carbohydrates. In diabetes, as will be noted, the diet is composed almost exclusively of the latter two foods. He requires a smaller amount of carbohydrates, fewer calories in general, and a greater quantity of fat than the ordinary individual. He should utilize the minimum number of calories, twenty to thirty per kilo, or about ten to fourteen per pound. This is a little less than the ordinary individual. As dia-

* Read before the San Diego County Medical Society, November 28, 1922.

betes is a condition in which the normal utilization of carbohydrates is impaired, a decrease of approximately 24 per cent of the normal carbohydrates is observed. There is practically no restriction in the protein diet of the diabetic, except at the beginning of the treatment. Fat, however, forms the bulk of the diet. The life of the Eskimo affords ample proof that it is both possible and feasible to maintain life on a diet in which carbohydrate is largely replaced by fat. The amount of fat allowed a diabetic must be observed closely, for while it constitutes a main article of diet, it is also a chief source of the dreaded acidosis, although protein may contribute to it as well. Fat, therefore, while it may preserve the life of the diabetic because of the high nutritive value, may destroy it by causing acid poisoning. While the caloric value of alcohol is high, 1 cc. yielding seven calories, it does not hold a high place in modern diabetic therapy. It is rarely necessary to restrict the amount of liquids in diabetics, although large quantities may disturb the digestion. Salt is of great service to the diabetic, for without it the weight falls, due to the excretion of water, the skin of the patient becoming dry. Diabetic patients are generally thirsty, because they must produce enough urine to dissolve the sugar and thus remove it from the body. Likewise, they are usually hungry because they must eat enough to sustain life, and in addition enough to make up for the sugar lost in urine.

The purpose of the dietetic treatment is to enable the diabetic, by the rearrangement of his diet, to lead a useful life. This is best obtained by keeping the urine sugar-free. While sugar in the urine is chiefly depending on sugar and starch in the diet, the simple reduction of the total quantity of the diet may result in its elimination. A reduction of the total caloric value of the diet is most easily effected by giving up fats in all forms. The simplest procedure in a mild case of diabetes is to decrease the total quantity of the diet, irrespective of its quality, to such a point as will bring about a slight loss of weight. Frequently this is all that is necessary to make the urine sugar-free. While there are many ways by which the urine of the diabetic may be made sugar-free, the simplest of all is by fasting, and in reality all other methods converge to this. If fasting for a day or two appears inadvisable, the simple omission of all fats, which materially reduce the nutritive value of the diet, may render the urine sugar-free. Formerly, physicians endeavored to get their patients sugar-free by the reduction of the carbohydrates in the diet, at the same time immediately increasing the amount of fat and protein, to make up for the calories lost. On account of various dangers attending, this practice has been greatly abandoned. The ideal method is to make the urine of the diabetic sugar-free, without any risk to the patient. This is brought about either by complete fasting or by withdrawal of fat from the diet, and the subsequent reduction of carbohydrates and proteins to a point at which the patient no longer voids sugar in the urine. Frequently both methods are combined. In severe, long standing and compli-

cated cases, without otherwise changing habits or diet, omit fats, and after two days decrease the protein, at the same time halving the daily amount of carbohydrate until the patient is taking 30 grams, or less. Then fast for four days, unless the urine becomes sugar-free earlier. During the fasting days, allow the patient to drink water freely; also tea, coffee, and thin broths as desired. In moderate cases begin fasting at once, without the preliminary or gradual abstinence. Fasting is seldom complained of by patients, unless before the ordeal starts; the tea, coffee, and broths being sufficiently grateful. While vigorous exercise is contraindicated during the fast, it is not necessary for the patient to remain in bed. It is agreeably surprising to observe how quickly the urine becomes sugar-free, after the fasting days. In general, cases seen soon after the onset become sugar-free promptly, while the reverse is true for those of long standing. Rarely is it necessary for a patient to fast more than a few days; and it is usually preferable, after four days of fasting, if the urine still contains sugar, to feed the patient for two days and then fast again. When the twenty-four-hour quantity of urine has been sugar-free, gradually add carbohydrate until the sugar returns. In this way the tolerance for carbohydrates is determined.

TABLE NO. 1

Carbohydrates Content of Ordinary Vegetables and Fruits

5 Per Cent	
Lettuce	Sorrel
Spinach	Tomatoes
Asparagus	Cabbage
Rhubarb	Raddish
Kraut	String Beans (canned)
Greens	Celery
Cucumbers	Mushrooms
Egg Plant	Artichokes (canned)
10 Per Cent	
String Beans	Green Peas
Pumpkin	Artichokes
Turnip	Parsnips
Squash	Lima Beans
Beets	
Carrots	
Onions	
Green Peas (canned)	
20 Per Cent	
	Potatoes
	Baked Beans
	Green Corn
	Boiled Rice
5 Per Cent	
Ripe Olives	
Grapefruit	
10 Per Cent	
Orange	
Lemon	
Cranberries	
Strawberries	
Gooseberries	
Peaches	
Watermelon	
15 Per Cent	
	Apples
	Pears
	Apricots
	Cherries
	Currants
	Raspberries
20 Per Cent	
	Bananas
	Plums

The carbohydrates are usually given in the form of 5 per cent vegetables, choosing those which are more bulky. It is best to have these boiled in three waters. Following the 5 per cent vegetables, one can proceed to the 10 per cent group. When the

urine is again sugar-free, decrease the carbohydrates to two-thirds below the tolerance, and add, about 20 grams daily, protein in the form of egg-white, fish, or lean meat until the patient is receiving about one gram protein per kilogram weight. The advantage of increasing with the determination of the carbohydrate tolerance is that one approaches a nearly normal condition. Fat can now be added to the diet, from 5 to 20 grams per day, unless acidosis appears, or until the patient ceases to lose weight. The return of sugar requires fasting for twenty-four hours, or until the urine is again free from it. Resume the former diet, adding fat gradually and last of all, in order to maintain a high carbohydrate tolerance. Whether sugar appears afterward or not in the urine, it is desirable upon one day each week to rest that function of the body which controls the assimilation of sugar by either a complete fast-day or a diet of low caloric value. It is noted that children become fretful on fast-days, although physically they endure it well. If they are allowed a few green vegetables, in addition to the broth, they get along more comfortably. Fast-days and rigid diet is imperative in the case of children, for disobedience, with them, means death. The good effects of a fast-day, with children as well as adults, continues many days beyond the actual fast. The caloric needs of a diabetic vary not only with each case, but vary with each case each day. It must be remembered that an individual trained to be quiet or lying down can get along well on twenty calories per kilogram, while those whose economic demands require that they engage in active work may require as high as thirty calories. Habits of each individual patient should be studied, and their caloric needs gauged accordingly. The responsibility for the management of the diet should, except in the case of very young children, rest with the patient himself; hence the necessity of knowledge pertaining to food values by the patient. All diabetic patients should eat too little rather than too much. With a return to normal weight, sugar may appear. The carbohydrates in the diet should be divided between the three meals. It is always possible to get articles of food which are included in a strict diabetic diet for a few meals, such as eggs, meat, butter, oil, and even 5 per cent vegetables.

Acid intoxication is the bugbear of the diabetic; formerly six out of ten succumbed to it. Acidosis in the diabetic differs in no respect from that occasionally met in normal individuals when carbohydrates are omitted from the diet for several days. The ferric chloride reaction will then appear just as in a severe diabetic, and if at the same time the quantity of fat is increased, a type of acidosis will be caused, so severe as to threaten the life of the individual. If, however, a healthy body is gradually accustomed to live upon a diet low in carbohydrates, acidosis is avoided. The same course of events takes place in diabetics. Formerly, fat was given to a patient in whom the carbohydrate was withdrawn, in order to maintain his weight. Today patients are first deprived of fat, in order to do away with the dangers of acidosis; then they

are made sugar-free by gradual reduction of carbohydrates and protein by simple fasting. When the patient is sugar-free and the diet is increased, fat is the last element to be added. In severe acidosis, supply a special nurse, keep the patient in bed, and warm. Move the bowels with an enema, avoiding drastic cathartics. Give large quantities of water, at least one quart each six hours, which must be hot and sipped slowly. In addition, give coffee, tea, and thin broths. Salt solution may be given by rectum or intravenously. If possible start the fast at once, giving in addition four teaspoonfuls of salt daily. If there is retained food in the stomach, when the patient is first seen, empty it at once. Sustain circulation with the help of digitalis and black coffee by mouth and rectum. Avoid the administration of alkalies.

TABLE NO. 2

Quantity and Caloric Value of One Ounce of Common Foods

	Grams of Carbohydrates	Protein	Fat	Calories
Oatmeal	20	5	2	120
Shredded wheat	23	3	0	105
Cream, 40 per cent.....	1	1	12	120
Milk	1.5	1	1	20
Brazil nuts	2	5	20	210
Oysters (six)	4	6	1	50
Meat (cooked, lean).....	0	8	5	75
Bacon	0	5	15	155
Cheese	0	8	11	130
Egg (one)	0	6	6	75
Vegetables, 5 per cent....	1	0.5	0	6
Vegetables, 10 per cent...	2	0.5	0	10
Potatoes	6	1	0	30
Bread	18	3	0.5	90
Butter	0	0	25	225
Oil	0	0	30	270
Fish (cod)	0	6	0	25
Broth	0	0.7	0	3
Fruit, 5 per cent.....	1.5	0	0	6

Most diabetic patients are obese prior to the onset of the disease. When the sugar begins to be lost in the urine the weight falls, because the body is unable to utilize the food taken. During the treatment a too great loss of weight must not be permitted, as this fact is frequently due to a deficient number of calories. The diabetic diet is expensive, whether treated or untreated, but in the latter case the waste is enormous. Joslin reports an untreated diabetic who ate thirteen eggs for breakfast, not as a stunt, but because he wanted them. Another case reported by him, a lady thirty-five years of age, ate a dozen eggs a day, also maintaining a diet containing sixty calories instead of the normal thirty calories, the patient, notwithstanding, losing sixty-six pounds in a little over two years. This was due to the great loss of sugar, which was over 5 per cent. It is obvious that there is a great saving of food, which results from becoming sugar-free under modern treatment. Untreated diabetics frequently eat as much as three

men of their own size. The diet of the treated diabetic, however, is also expensive. In hospitals it has been observed that the diabetic's diet is 26 per cent more expensive than the ordinary patient's diet. He cannot exist on ordinary cheap carbohydrate foods, such as bread, cereals, and potatoes, but must replace these with expensive varieties, such as eggs, meat, broths, and fresh vegetables. The teeth of the diabetic should be kept in good condition, since the malady grows worse in the presence of inflammatory conditions about the teeth and gums. The skin must be kept unusually clean; a tub bath daily is most desirable. Patients should be warned of the dangers of wounds, and should report any skin affections or lesions at once. Absolute cleanliness of the body serves to prevent the tendency to furunculosis, which was formerly very common. While active purging of the bowels is to be avoided, they should be made to move daily. Depend more on regular habits for bowel action, or if necessary use an enema or simple laxative.

TABLE NO. 3

Comparative Diet of a Man, Sixty Kilograms Weight (132 pounds)

Normal		
Carbohydrate	250 grams or	1000 calories
Protein	70 grams or	280 calories
Fat	65 grams or	585 calories
	385	1865
Diabetic		
Carbohydrate	75 grams or	300 calories
Protein	90 grams or	300 calories
Fat	110 grams or	1125 calories
	275	1725

The use of drugs in the therapy of diabetes is ordinarily considered a mooted question. The condemning and discouraging of prescribing them, however, for the purpose of making the urine sugar-free, has been a heavy favorite indoor sport. Personally I am not prepared to join the ranks of the latter, since I have been using, for the past five years or more, a pancreatic extract in connection with dietetics, both of which hereby receive credit for satisfactory results obtained. Experimentally, with animals it is easy to produce diabetes by simply removing a large portion of the pancreas. If the diabetic patient could secure a new pancreatic gland he would be cured. While surgery as yet has not been successful in this respect, the administration of a pancreatic extract to a function-impaired gland appears rational to me. The widespread application of organotherapy is a conspicuous feature of modern therapeutics. While yet in its infancy and experimental stage, it has grown so rapidly, and its uses have proven so successful, that its application demands recognition. As stated at the beginning, we have yet much to learn about diabetes, and the future will reveal that advancement along this line has kept pace with the onward, general progress of medicine and surgery.

Granger Building.

THE CLINICAL USES OF OXYGEN *

By LORRULI A. RETHWILM, M. D.

Oxygen, discovered by Priestly and Lavoisier in 1771, was put to no practical use for many years. In 1868 Andrews of Chicago first showed the value of oxygen with nitrous oxid, thus making nitrous oxid anesthesia practicable.

Probably the first apparatus for administering nitrous oxid and oxygen in known proportions was made by Hillischer of Vienna. His findings led Hewitt to investigate the value of oxygen. The latter gave special attention to its use with nitrous oxid and showed that, when air is given with nitrous oxid, only 60 per cent nitrous oxid can be given, as 40 per cent air is necessary if the patient is to get the least amount of necessary oxygen from the air. If oxygen is given in this same percentage, the 32 per cent of useless nitrogen in the air can be replaced by the same amount of nitrous oxid and a deeper, more satisfactory narcosis is the result. In 1904 Gwathmey proved by experiments that oxygen increases the value of all anesthetics as regards life without decreasing their anesthetic effect.

In 1909 Davis of Chicago made use of oxygen with nitrous oxid in obstetrics; a Cesarean section was performed under it. The next year Guedel began using nitrous oxid-oxygen in obstetrics, practically as it is used at the present day.

At various times oxygen, used as a measure to be tried in extreme cases, has been found of absolutely no benefit. This is largely because it was used too late, or was given through a funnel inverted over the patient's face. Oxygen given this way does practically no good, as by this method the oxygen in the alveolar air is raised at most only 2 per cent.

Three atmospheres of oxygen give pneumonia to animals, and Lorraine Smith has shown that animals develop pneumonia if kept in an atmosphere of pure oxygen for several days, but 70 per cent or less oxygen can be breathed for any length of time without harm to the patient.

The hemoglobin is usually nearly saturated with oxygen in a normal person, but the hemoglobin only stores oxygen which it releases to the plasma as the latter gives up its oxygen to the tissues. About one-fortieth of the oxygen of the blood is carried in the plasma, and with increased pressure of oxygen in the alveolar air the plasma will carry more than it normally does. Bohr of Copenhagen demonstrated that, when the carbon dioxide in the blood is lowered, the hemoglobin will not give up its oxygen to the plasma, and the result is an anoxemia with plenty of oxygen in the blood. This may be overcome by adding oxygen with some re-breathing or some carbon dioxide.

Normal alveolar air contains 16.5 per cent oxygen. Delivered into the pharynx through a catheter in one nostril, it will raise the alveolar oxygen over 20 per cent, and if the other nostril is closed rhythmically the alveolar oxygen may be

* Presented before the Anesthesiology Section of the State Society at the annual meeting in Yosemite.

as high at 59.9 per cent. A Meltzer mouth tube for oxygen with rebreathing gave 34.6 per cent alveolar oxygen after nine minutes' use; repeated with nose clamped, gave 86.7 per cent. At this percentage the oxygen in the plasma is raised to seven times the normal amount.

During the war interest in oxygen revived. Hoover and others noted that, in cases with foam in the air spaces, oxygen relieved the cyanoses and anoxemia, but not the air hunger. By experiments, oxygen has been proved an essential to the life of

oxygen want, but to be caused by retention of carbon dioxide in the blood, which occurs, for example, when there is moisture in the air spaces; although carbon dioxide influences the respiratory center, oxygen-want also affects it, at first stimulating, and if it persists, making it stop acting because of anoxemia. Promptly given, oxygen will start it again.

Barcroft, Haldane, Douglas, and others have shown the benefit of oxygen in gas-poisoning, pneumonia, and some other anoxemias, both as immediate treatment and for late symptoms, such as nocturnal dyspnoea, palpitation, mental depression, etc. They use 35 to 60 per cent oxygen. A mask for giving oxygen with rebreathing was usually not borne well by their patients, and, though wasteful, they found a catheter inserted through the nostril to the nasopharynx best. An oxygen room with 50 per cent oxygen, excess carbon dioxide being removed, was found excellent for hospital treatment, especially in late cases.

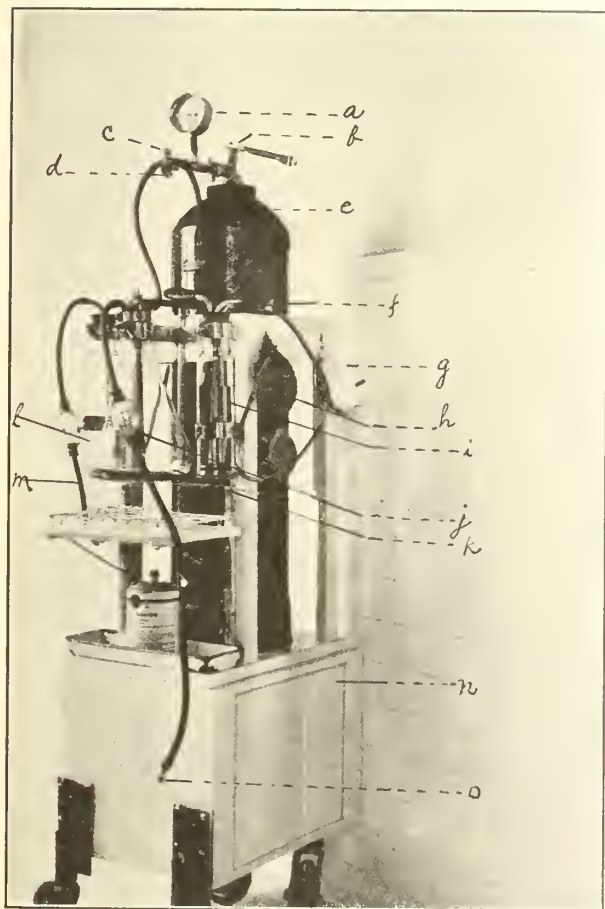
Stadie, Meakins, and others—more recently Barach and Woodwell—have proved the benefit of oxygen in pneumonias. The period before the crisis in lobar pneumonias is often saved from a fatal outcome by oxygen, and the recovery of all pneumonias hastened. Cardiac cases were also improved with oxygen treatment, but in a lesser degree.

Oxygen therapy is now being used in resuscitation work; surgical procedures, such as inflation of psoas abscesses, knee-joints and wounds, and in tuberculous peritonitis, with duodenal lavage in cases of fermentative and putrefactive dyspepsias; in asthma, cardiac disease and many anoxemias, with more or less success.

At Stanford hospital we use oxygen in more than half of our anesthesia cases, not counting the oxygen used in nitrous oxid-oxygen anesthesia. Before putting a patient to sleep we always make use of the breath-holding test, first mentioned by Stange of Petrograd, now used by Jones of Columbus and others. This consists in having the patient take, through his nose, a deep breath and hold it. Those who cannot hold it longer than ten to twenty seconds are poor anesthetic risks; thirty to forty seconds is the normal length of time the breath can be held. Among other indications this test gives us an idea of the oxygen need of the patient.

Our inductions are begun with a large percentage of oxygen with the nitrous oxid. This greatly lessens, or takes away, the sense of suffocation of which nervous patients especially complain. After a few breaths the oxygen percentage is reduced to about ten, in ordinary cases. By using a large percentage of oxygen with nitrous oxid, this mode of induction can be safely used on children, one or two years old, and ether added in the usual manner on the gas machine before changing to ether vapor or ether by drop method.

When giving ether we frequently add oxygen, the method of administration varying with the case. At times it is given through a catheter inserted through the nose as far as the pharynx. Again, we may give it through the mouth hook; then it is necessary to have the patient breathing through his mouth, either with mouth open, as in tonsil



A. Gauge. B. Valve for opening tank. C. Two-way tap. D. Adjusting screw. E. Oxygen tank. F. "Shut-off" on air tube. G. Vapor mask. H. Cautery bulb for giving even flow of air. I. Ether in cylindrical bottle. J. Murphy drip bulb. K. Ether in Erlenmeyer flask. L. Water in cylindrical bottle. M. Tube for giving oxygen without ether. N. Cupboard with door in back and on side; contains suction apparatus, box of catheters, etc. O. Right angle tube; attaches to vapor mask.

the cells, and if it can be given the patient so that the oxygen unsaturation in the blood will be normal, or less than normal, the patient can frequently be tided over a critical period, in which lack of oxygen would irreparably damage his tissues, in particular his heart. Haldane has declared oxygen to be not merely a palliative measure, but one to help the body recuperate, as it is always trying to revert to normal. Improvement after oxygen usually lasts.

It is important to remember that anoxemia is often present without cyanosis or air hunger. Air hunger has been shown to have no connection with

work, or with a free airway for the passage of oxygen as is obtained by inserting a wire airway in the patient's mouth. A closed metal breather will not allow the oxygen from the mouth hook to be inspired, and most of it escapes from the side of the mouth. One way in which we very frequently administer it is with the vapor mask which Dr. Caroline B. Palmer has had made. The mask consists of a wire mesh Yankauer mask on the center of which a piece of copper the size of a dime has been soldered; this piece of copper is perforated centrally with about fifty pinpoint openings. Above the disk, on top of the mask, a small cylindrical tube, five-eighths inch in diameter and one inch high, is soldered. A small tube bent at a right angle, and about one inch long in each direction, fits into this, and the rubber tubing through which the oxygen or ether vapor is conducted is inserted on the other arm. This mask is placed over mouth and nose. A towel may be folded around the junction of mask and face to prevent escape of oxygen or ether vapor. We have several small tanks of oxygen equipped with wash bottle, rubber tubing, and mouth hook. They stand in small wooden frames on rollers. These can be used any time desired while ether is being given by any method.

In rare instances when a patient has held his breath during induction, due to some reflex, and has become cyanotic, we have found that oxygen given through a mouth hook or through a catheter in the pharynx would relieve the cyanosis almost at once, even before the patient had taken a breath, showing that this oxygen reached the lungs, whereas oxygen given by any face mask at the same pressure would not change the patient's color until he took a breath.

Our usual way of giving oxygen is by the use of oxygen-ether vapor. Our apparatus is arranged so that either air or oxygen can be passed through the ether and the vapor delivered to the patient. Our favorite machine, which we call Dr. Palmer's, because it was made under her direction about ten years ago, is a wooden frame holding an oxygen tank fitted with a pressure gauge and an adjusting screw for regulating the flow of oxygen. Beyond the screw is a two-way tap, by which the oxygen can be either directed to the right side of the machine and passed through a wash bottle of water, and then given to the patient, or, by turning the tap will pass to the left side of the machine. Here it is connected with a cylindrical bottle and a two-liter Ehrlenmeyer flask, both containing ether, one or both of which can be used, in varying combinations depending on the strength of the vapor desired. The tap can also be turned halfway so that oxygen will pass through the wash bottle containing ether and at the same time through the ether bottle of the machine. In this way a small amount of ether can be given and a great deal of oxygen simultaneously. Oxygen given alone reaches the patient at room temperature. In giving oxygen-ether vapor the mixture is between room and body temperature when inhaled, for with several layers of gauze over the mask, and especially if a towel is placed loosely about the edge, there will be some rebreathing and the vapor will be but a little less

than body temperature when inhaled. We find that when using this vapor method a great deal less ether is required than by the drop method even with oxygen added, and the depth of anesthesia can be varied more easily. Because of their need of oxygen we use ether-oxygen vapor routinely for very young patients, the very old and feeble, toxic, anaemic and nervous patients, for goiter cases or any case with increased metabolism, such as patients with high temperature.

When a patient breathes noisily or laboriously we give oxygen and find that he will usually breathe quietly in less than five minutes. If a patient has shallow and rapid respiration, the addition of oxygen will almost invariably make him breathe more slowly and more deeply. When the pulse begins to be rapid or of poor quality we give oxygen, and find the pulse usually improved in rate or quality or both. If it does not, or if the patient has lost fluid at operation, or before by hemorrhage or profuse sweating or vomiting, we give salt solution under the skin or intravenously so that there will be more plasma to carry more oxygen in solution to the tissues and keep them in good condition until the anoxemia can be better taken care of by the protective mechanism of the body.

When the patient attempts to vomit, as happens occasionally during an induction or during nitrous oxid administration, a few breaths containing a large percentage of oxygen will usually avert vomiting and straining.

In nitrous oxid-oxygen anesthetics we use oxygen sufficiently freely to keep the patient free from cyanosis. Harmful effects of nitrous oxid have come only when it was pushed to the point of asphyxia and the patient was suffering from oxygen want. The type of patients listed that require oxygen during an ether anesthesia also need a larger percentage of oxygen under nitrous oxid-oxygen. In these cases we prefer to add a small percentage of ether to our anesthetic if needed to relax the patient, rather than force nitrous oxid and thereby reduce the oxygen to an amount which would be harmful to the particular person. If ether is absolutely contraindicated, the addition of local anesthetics may be sufficient to give a satisfactory anesthesia, or the operation might be done under nitrous oxid-oxygen analgesia.

At the close of an anesthesia we often give oxygen for a short length of time, usually with the mouth and nose covered sufficiently to conserve carbon dioxide by moderate rebreathing. In nitrous oxid anesthesia this brings the patient out of the anesthetic more quickly and quietly than respirations of the same depth and rate when the patient is breathing air. Oxygen given after an ether anesthesia helps "wash" the ether out of the lungs more quickly; especially is this true if oxygen-ether vapor has been given throughout. It also helps to obviate post-operative nausea.

In obstetrics we use nitrous oxid and oxygen. The usual percentage is twenty of oxygen and eighty of nitrous oxid. Some patients can have 25 to 30 per cent of oxygen until the severer terminal pains. We have the patient take three deep

breaths quickly. The first two are exhaled and the third is held while the patient bears down. If the pain is more severe, more breaths can at once be taken, but we find this is usually sufficient. If the patient is susceptible to nitrous oxid more oxygen can be given. If the pain is a long one a single additional breath of the same mixture can be taken and held while the patient pushes, and a third single breath in like manner. We use the high percentage of oxygen for the sake of the baby, which in utero is susceptible to nitrous oxid, but with the percentage of oxygen mentioned, no injury to the baby's heart or respiratory center will occur. As soon as the head is born pure oxygen is given until the baby is born and is pink, provided the cord is still pulsating. Recently a baby became blue about a minute after it was born, oxygen having been stopped in the meantime. As the cord was still pulsating the mask was again put on the patient's face and all cyanosis in the baby disappeared after the mother had taken a few breaths of oxygen, the baby not breathing meanwhile. Results are not always quite as striking as this. Besides protecting the baby the percentage of oxygen we use is safe for the mother, even if labor is complicated by toxemias or some chest condition.

During the influenza epidemic we were occasionally called upon to give nitrous oxid to an influenza patient in labor. In some cases we added more oxygen than our usual 20 per cent. This was especially true of a few pneumonia cases. One case is worth mentioning in this connection. The patient was dangerously ill with influenza pneumonia. The case was a breech presentation, and nitrous oxid-oxygen was given. Fifty per cent oxygen was used for pains and 30 per cent during delivery, with two minutes pure oxygen as soon as the baby was born. The patient was returned to bed in better condition than she had been before delivery, and made a good recovery. In this case the large percentage of oxygen given was probably instrumental in tiding the patient over a period of anoxemia, which experimenters have shown may be sufficient to determine the favorable outcome of a pneumonia or at least hasten it.

In Caesarean sections we also add about 20 per cent oxygen to the nitrous oxid, preferring to use a minute amount of added ether vapor rather than decrease the oxygen. Frequently, when the baby is delivered we give pure oxygen for the short interval until the cord is clamped. This is not long enough to allow the patient to awaken. In almost every case the child cries as soon as removed from the uterus.

CONCLUSION

The three physicians on the regular anesthetic staff at Stanford hospital have had ample opportunity, during the average of about 3000 cases a year, given or supervised by them, to compare the clinical differences of patients receiving oxygen and those not given any. In general these anesthetists have independently reached the conclusion that, besides the advantages just noted, an oxygen-ether anesthesia will usually be smoother, more even, with the use of considerably less ether to keep the

patient asleep than is necessary when a plain ether anesthesia is given. Their clinical observations verify the advantages noted by the many experimenters of late years who have tested the value of oxygen. Various definite tests and experiments have been planned, but not undertaken. I can only say that in actual practice during many years of use we find most patients under anesthesia do better with oxygen out of all proportion to anything we so far know as the cause.

2217 Webster Street, San Francisco, Cal.

THE DIAGNOSIS AND CURE OF GONORRHEA

A COMPARATIVE STUDY OF SMEARS, CULTURES, AND COMPLEMENT FIXATION METHODS *

By GEORGE W. HARTMAN, M. D., San Francisco
(From the Urological Department, Stanford University.)

The mooted question of the cure of gonorrhea seems by these investigations to be divided into two stages: (1) The cessation of infectivity, and (2) the subsidence of clinical signs and symptoms.

Many varying standards have been suggested for the determination of cure. Harrold bases his conclusions upon the cultivation of the gonococcus, provocative and serological tests. Fraser sets very reasonable and easily attained standards, including disappearance of symptoms, examination, observation, provocative vaccines and sounds, with a plea against overtreatment. Clarkson devises a very comprehensive set of tests. Rosenthal describes a set of tests which are well within the resources of anyone.

The British Medical Research Committee finds that "the stage has not yet been reached at which a diagnosis can be made with certainty. . . by bacteriological methods alone."

The committee on medical research and laboratory questions of the all-American conference on venereal disease which met at Washington December 6 to 11, 1920, feeling the need of further scientific knowledge on the subject, urged the conference to encourage research work along the lines of diagnosis.

With the object of simplifying the various criteria offered by the different observers and placing them on as nearly a measurable basis as possible, we attempted to devise practical standards. The material studied comprised several hundred cases of acute and chronic urethritis, the last 100 observations having been used for critical study.

The factors considered were history, appearance of smears stained by methylene blue, and the Gram method at two laboratories working independently, cultures on various media and the complement fixation tests. It is realized that for a test to be of great value it must be simple enough to encourage its frequent application. Everyone has noted elaborate tests offered for diagnosis, which are so com-

* Presented before the Urology Section at the annual meeting in Yosemite.

plicated as to render them not practicable for regular use.

It would appear that the presence of a few gonococci, apt to be overlooked in the examination of smears, could be vastly magnified by successful cultures. Until comparatively recently the cultivation of the gonococcus has been looked upon as an extremely difficult procedure, available only to the most skilful laboratory workers. Wheery and Oliver, however, discovered that the gonococcus can be grown well under reduced oxygen tension. This they accomplished by culturing *B. Subtilis* opposite the gonococcus, using top and bottom of Petri dishes. Schwartz simplifies this method, making the growth of the gonococcus almost as easy as that of any other organism. The method will be described later in detail.

Our method of attack was to start with frank gonorrheas in either sex, and, verifying this with stained smears, to persist until positive cultures were got in nearly all instances; having arrived at this point to determine at what time the gonococci could no longer be cultivated and combining with this the complement fixation tests. Finally cases at all stages were subjected to these tests.

ROUTINE

All smears were made in triplicate. If a spontaneous discharge was present, care was taken to wipe off that which was exposed and to insert the platinum loop well into the urethra or cervix. If there was no discharge, it was produced by gently stripping the urethra. In the male, if this produced no visible amount, the prostate and seminal vesicles were massaged.

All smears were spread on slides as thinly as possible, air dried and fixed by three rapid passes through the flame. It is of advantage to make smears at either end of the slide, thus saving time and slides.

If, upon staining with methylene blue, intracellular diplococci were found, a Gram stain was made by two laboratories working independently. The following technic for Gram staining was found satisfactory:

1. Stirling's gentian violet, one-fourth minute, wash with water.
2. Gram's iodine, one minute, wash with water.
3. Ethyl alcohol (95 per cent) until thoroughly decolorized—about two minutes, wash with water.
4. Safranine (approximately one part saturated alcoholic solution to seven parts of aqua distillata) one-half minute, wash with water.
5. Blot almost dry and heat gently to dryness.

For culturing, various media were tried. Hydrocele, pleural, ascitic, human blood and horse serum agar were used with apparently equally good results. We finally settled upon ascitic agar as the most easily obtained. The method of preparation of this is as follows:

Five hundred grams of fresh lean meat (veal or beef) is finely minced and thoroughly mixed with 1000 cc. of distilled water. This mixture is allowed

to stand on ice for twenty-four hours. The liquor is then decanted and the remainder expressed through cloth, adding enough distilled water to make 1000 cc. Boil until the albumin of the meat infusion coagulates. Correct to an acidity of pH 7.6 by the use of N/10 NaOH. Titrate at close to 100° C., to eliminate effect of carbon dioxide. Boil again for a short time, filter and make up to 1000 cc. with distilled water. Add 10 grams peptone (Bacto. Difco.), 5 grams NaCl (C. P.) and 20 grams agar, and boil until all is dissolved. Let cool to 50° C., add whites of three fresh eggs and clarify by filtration, or filter and refilter through absorbent cotton until media are clear. Tube the media and autoclave at ten pounds on three consecutive days. Melt the agar, cool to 50° C., add sterile hydrocele fluid in the proportion of 1 cc. of fluid to 2 cc. of agar. Slant and stopper with sterile rubber stoppers.

Cultures are made as follows:

The glans penis in the male or the tissue surrounding the urethra and cervix in the female are carefully sponged with mercury cyanide 1/1000, the platinum loop introduced well into the urethra and smeared over the agar slants, the operation being repeated.

This mode of inoculation gives discrete colonies, the identification of which is easier than when the liquid at the bottom of the tube is inoculated and the whole flowed over the surface. Culture medium is kept in the incubator before the inoculation, which insures its being sterile and at the best temperature at all times. If cultures are to be made away from the laboratory, the test tubes containing the medium are placed in hot water (98-100°) until thoroughly heated. After the inoculation they are kept warm until placed in the incubator. The oxygen tension is reduced according to the method described by Schwarz by rotating the test tube in the flame of a Bunsen burner until it has been thoroughly heated, stoppering it and placing at once in the incubator, which is maintained at 37.5° C.

Care must be taken that the tube be not heated sufficiently to crack it or to destroy the culture. Tightly fitting rubber stoppers are used, and if they happen to be moist, by observing the film between the stopper and the tube, one can sometimes detect air leaks as the tube cools. Failure to accomplish a suitable growth is sometimes due to these leaks and has been overcome in our experience by reheating the tube, which subsequently showed a luxuriant growth. Cultures are inspected at twenty-four and forty-eight hours; at the latter time they are usually ready for study. Criteria used in examining the cultures are the shape of the colonies, morphology of the organisms and staining characteristics, using standard gram negative and positive organisms for control.

TABLE NO. ONE

PER CENT OF POSITIVE FINDINGS IN KNOWN POSITIVES DURING ACUTE STAGE

No. Cases	History	Gram Stains No. 1 No. 2	Cultures	Complement Fixation	Other Findings
36	97%	83% 92%	58%	5.5%	
8*	100%	0	0	0	Chronic Prostatitis of Gonorrheal Origin Pus cells and reduced lecithin in prostatic and seminal secretions.
15	100%	0	0	0	Re-examination of Former Gonorrheas Cultures showed staphylococci, diptheroids and a gram negative bacillus.
21	0	0	0	0	Non-specific Urethritis

* Including one stricture.

TABLE NO. TWO

TIME OF DISAPPEARANCE OF POSITIVE FINDINGS

Case No.	History	Smrs.	Cltrs.	Complement Fixation	Notes
76	Acute Urethritis Cervicitis.	5 Days	5 Days	XXX after 4 Days	C. F. Fluctuated between XX and XXX for 70 days; negative after 88 Days. Diphtheroids and Staphylococci present.
83	Acute Anterior Urethritis	See Note		Always Negative	Disappeared in smears and cultures after 12 days; reappeared in smears after 20 days. Staphylococci.
94	Chronic Anterior Urethritis	17 Days	17 Days	Always Negative	Urethral discharge still present. Staphylococci.
2	Ditto	30 Days	30 Days	Positive at 24 Days; negative thereafter	Urethral discharge still present. Staphylococci and Streptococci.
96	Ditto	31 Days	20 Days	Always Negative	Urethral discharge present after 54 days. Diphtheroids and Staphylococci.
14	Chronic Anterior Urethritis	37 Days	Never Positive	Always Negative	Urethral discharge still present. Staphylococci.
73	Acute Anterior Urethritis and Epididymitis	60 Days	60 Days	Always Negative	This case beyond observation between cultures. Staphylococci.
23	Acute Anterior Urethritis	70 Days	58 Days	Always Negative	Auto infection following drinking bout. Staphylococci and Diptheroids.
87	Ditto	45 Days	45 Days	Always Negative	This case beyond observation between cultures. Staphylococci.
60		35 Days	33 Days	Always Negative	Staphylococci and Diptheroids.
88		Present, urethra and cervix after 35 days		Always Negative	Staphylococci and spore forming bacilli.
93		Present 124 days after 276 Days		Always Negative in spite of Vaccines	Infection of the Periurethral Glands. Diptheroids and Staphylococci.

Table No. 1 contains the findings in the various cases.

In thirty-six, during the acute stage, 97 per cent gave positive histories. Gram negative intracellular diplococci were found in 83 to 92 per cent, depending upon the technician, or in 100 per cent if combined. Gonococci were successfully cultivated in 58 per cent. Complement fixation was positive in 5.5 per cent. In eight cases, including one of stricture, all search for gonococci by smears or cultures were negative, though the prostatic and vesicular secretions contained pathological amounts of pus and reduced lecithin granules. Bacteriologically, these contained staphylococci, small gram negative bacilli and diptheroid bacilli.

Fifteen cases, apparently cured, on re-examination showed entirely negative findings except that bacteriologically they were as above.

Twenty-one cases of non-specific urethritis and vaginitis also showed the same organisms. All of these organisms were not present simultaneously nor in all cases.

Table No. 2 shows the time of disappearance of positive findings after the beginning of treatment.

This varies in the smears from five to seventy days, with one case of litritis in which it has persisted for over 276 days.

In the cultures we have got successful growths up to 124 days after beginning treatment. The average time (excluding incompleated cases) for the disappearance of gram negative intracellular diplococci is slightly longer than that for getting successful cultures. In no instance with patients under treatment was it possible to get cultures of gonococci after the gram negative diplococci had disappeared from the stained smear. The complement fixation test (in this series of cases at least) was of little value.

Notwithstanding the fact, however, that cultures and smears were negative, the patients were definitely not cured. There were still heavy urinary shreds or urethral discharge or both present. This, perhaps, justifies our opening statement, that the cure should be divided into two stages.

There may be those who would say at this time that the patients are not infective. It has happened, in our observation, that patients have been completely negative to smear and culture and be-

come positive again. This was noted in case 83, which was negative as to smears and cultures in twelve days. After physical exertion the smears became positive again in twenty-six days, remaining so for days.

What it is that serves to perpetuate discharges from the anterior urethra or pus in the prostate or seminal vesicle after the disappearance of gonococci we are at this time not prepared to state, but it is suggestive that staphylococci were present in the majority of cases after disappearance of gonococci, as also in the non-specific urethritis cases in which no other pathology was found.

What, then, shall we place as the criteria for cure?

1. Absence of all urethral discharge.
2. Urines, 1, 2 and 3, free from shreds; or if they be present, the shreds free from pus cells. (The All-American Conference considers shreds not important if they float for at least two minutes after agitating the fluid.)

3. Frequency of urination normal with no nocturia.

4. Prostate and seminal vesicles normal to palpation and free from pus cells. Lecithin present in prostatic secretions in normal amounts.

In many instances it is virtually impossible to obtain the desired degree of freedom from pus cells in these secretions. Cessation of treatment followed by a normal sexual life for a few months will usually clear up these remaining pus cells.

5. As the patient is being prepared for dismissal, sounds should be passed to determine the patency of the urethra and for their therapeutic effect. If this is done gradually, it will not be followed by a discharge.

6. Discharge following silver nitrate, if any, negative microscopically and bacteriologically to gonococci.

7. Testicles, epididymes and vasa should be normal.

8. Physical exertion should not produce discharge; neither should the injection of vaccines.

Endoscopy immediately after cessation of treatment is apt to give unsatisfactory results, unless one bears in mind the fact that treatment over the delicate mucus membrane of the urethra, together with the preceding infection, is very apt to develop a picture susceptible of misinterpretation. In this, one finds varying degrees of congestion and alteration of the normal striations. During endoscopy, it is well to palpate the entire surface of the urethra for spots of infiltration. Subsequent examinations at three, six, and nine months should establish the importance of any residual findings at previous examinations.

CONCLUSIONS

1. The cultivation of the gonococcus can be done as simply as that of any other organism, providing the medium is warmed before inoculating and kept warm until the oxygen tension has been reduced and the tube transferred to the incubator.

2. Ability to cultivate the gonococcus seems to

disappear first under treatment, and seldom has reappeared. The finding of gram negative intracellular diplococci is the second factor to disappear; the subjective and objective findings persist very much longer, and the patient cannot be considered to have been cured until they have been entirely eliminated. Despite favorable comment in the literature, we cannot attach much more favorable conclusion to the value of the complement fixation test than those drawn by Krotoszyner in February, 1918.

PROPORTION OF PHYSICIANS TO POPULATION

State	Population (1920)	Physicians* (1922)	People to each Physician
Alabama	2,348,174	2,313—	1,015
Arizona	333,903	372—	897
Arkansas	1,752,204	2,303—	760
California	3,426,861	7,549+	454
Colorado	939,629	1,822+	499
Connecticut	1,380,631	1,727—	799
Delaware	223,003	265+	842
District of Columbia	437,571	1,924+	227
Florida	968,470	1,348+	718
Georgia	2,895,832	3,274—	885
Idaho	431,866	452—	956
Illinois	6,485,280	10,716+	605
Indiana	2,930,390	4,353—	673
Iowa	2,404,021	3,490—	689
Kansas	1,769,257	2,492—	709
Kentucky	2,416,630	3,155—	766
Louisiana	1,798,509	2,058+	874
Maine	768,014	1,067—	718
Maryland	1,449,661	2,349—	616
Massachusetts	3,852,356	5,977+	645
Michigan	3,668,412	4,653+	788
Minnesota	2,387,125	2,774+	860
Mississippi	1,790,618	1,792+	999
Missouri	3,404,055	5,827—	584
Montana	548,889	568—	966
Nebraska	1,296,372	1,913—	678
Nevada	77,407	140—	553
New Hampshire	443,083	615—	720
New Jersey	3,155,900	3,362+	939
New Mexico	360,350	399—	903
New York	10,384,829	16,857+	616
North Carolina	2,559,123	2,226—	1,149
North Dakota	645,680	517—	1,248
Ohio	5,759,394	8,086—	712
Oklahoma	2,028,283	2,600—	779
Oregon	783,389	1,158+	677
Pennsylvania	8,720,017	11,241—	775
Rhode Island	604,397	754—	801
South Carolina	1,683,724	1,368—	1,231
South Dakota	636,547	630—	1,010
Tennessee	2,337,885	3,228—	724
Texas	4,663,228	6,094—	765
Utah	449,396	497+	904
Vermont	352,428	556—	634
Virginia	2,309,187	2,503—	918
Washington	1,356,621	1,756—	772
West Virginia	1,463,701	1,751—	836
Wisconsin	2,632,067	2,772+	950
Wyoming	194,402	263—	739
Totals	105,708,771	145,966+	724

* The plus and minus signs indicate, respectively, an increase or a decrease in the number of physicians in the State since 1920.

EDITORIALS

RESPIRATORY STIMULANTS

A mere increase in respiratory rate does not fulfill the requirements of efficient ventilation in the lungs. This is strikingly demonstrated in the experimental hyperthermia of animals and in such clinical conditions as pneumonia, in which the respiration may be very rapid and shallow, but is accompanied by cyanosis and eventually results in severe asphyxia and death. On the other hand, it is well known from the original experiments of Loewy with morphin and those of Dreser with heroin that these drugs, in small or therapeutic doses, which slow or depress the respiratory rate, cause an improvement in ventilation. This is achieved by a marked deepening of inspiration and expiration which compensates for the slowed rate, the volume output of each respiration being greatly augmented. Physiologically, the effects resemble those of section of the vagi, but in the case of morphin and heroin they are not produced through a blockage of the normal augmentor vagus impulses. Therefore, morphin and heroin, in therapeutic doses, despite their depressant effects, act as true respiratory (ventilatory) stimulants. In large or toxic doses, morphin and heroin, of course, greatly reduce the ventilation, and finally paralyze the respiratory center. From what has been said it follows that a correct appraisal of drugs acting on the respiration requires a consideration of their effects upon the volume as well as the rate.

Using these factors together as a criterion of respiratory stimulation, Meissner, of the Pharmacological Institute at Breslau, recently tested a large number of commonly used and other agents with interesting and practical results. The drugs were administered by inhalation, and by hypodermic and intravenous injections in rabbits previously treated with toxic doses of morphin, chloral, and veronal. That is, the tests were made on truly depressed or impaired respiratory mechanisms, conditions which, more or less, approximate those requiring the administration of respiratory stimulants in clinical practice. Of the agents given by inhalation, amyl nitrite, acetic acid and acetic ether were found to be fairly efficient. Subcutaneously, the best results were obtained with epinephrin, camphorated oil and allyl-nor-codein. It is important to note that ether, alcohol and strychnin, which are generally mentioned in clinical textbooks of therapeutics and of other clinical subjects as useful reflex respiratory stimulants, were found by Meissner to be inefficient when injected subcutaneously. Caffein, hypodermically, increased the rate of respiration very markedly, but proved to be deleterious by causing convulsions. This recalls the results of Pilcher on the deleterious, synergistic action of caffein in the alcohol narcosis of cats; that is, among cats previously alcoholized and then treated with caffein mortality was greater than among the untreated, alcoholized. The majority of agents used by Meissner, and when injected in-

travenously, were found to be very powerful respiratory stimulants. This method of administration, however, cannot be recommended for general clinical use because of the injurious effects from irritation and convulsions, which usually supervened. The only agent that was found to be free from deleterious actions, when injected intravenously, and yet was highly efficient, was allyl-nor-codein. Meissner found further that a judicious combination of certain narcotics, especially urethane, together with such powerful central stimulants as atropin and strychnin, when injected intravenously, mitigated the convulsant and side actions of the drugs and yet preserved their marked respiratory stimulant qualities. However, it may be doubted if this would be a safe procedure in man. Of course, if the patient is moribund, or as a last resort, this procedure, as also the injection of camphorated oil intravenously, which Meissner found to be highly efficient in rabbits, might be tried. Under such conditions the simultaneous administration of urethane or other narcotics would appear superfluous.

As far as camphorated oil, ether, and alcohol are concerned, the results of Meissner agree entirely with those reported some time ago by Hanzlik of the Department of Pharmacology at Stanford University, who used a somewhat different method of study, which, however, took into consideration the changes in rate and amplitude (volume) of respiration, and also the duration of action, as the index of respiratory stimulant efficiency. Hypodermic injection of cold water (2° to 20° C) as found by Hanzlik to be most efficient, and 95 per cent alcohol and water at 38° C were the least efficient. When the respiratory center was depressed with toxic doses of morphin, the most efficient stimulation was obtained from camphorated oil, much less from chloroform and water (2° to 90° C), and least from ether, injected subcutaneously. Strychnin, caffein, and atropin were found to be inferior to reflex stimulants for both the untreated and morphinized respiratory centers, although strychnin and atropin were more efficient for the morphinized than for the untreated center.

Thus it is seen that two investigators, working independently, agree rather closely regarding the activity and usefulness of a number of agents commonly used as respiratory stimulants. According to these reports, it would appear that ether, alcohol, chloroform, and strychnin leave much to be desired as compared with the more efficient camphorated oil, cold water, and allyl-nor-codein. Although it is not possible to transfer these results directly into clinical practice, clinical opinion agrees partly, at least, as regards the inefficiency of ether, alcohol, and chloroform as respiratory stimulants.

However, it should not be necessary to depend upon opinion, for tests of respiratory stimulant efficiency based on considerations similar to those employed in experimental investigations can be quite as readily carried out on human subjects as on animals. Until such studies have been made clinically it would be better to be guided by the experimental evidences than by opinions and guesses. The importance of the subject is recalled from the

need of efficient respiratory stimulants in such conditions as pneumonia, meningitis, coma (uremic and diabetic), in accidents of anesthesia and operations, in poisoning from narcotics (morphin, chloral, veronal, sulfonal, etc.), and in other conditions in which respiration is endangered, especially in pediatric practice.

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THE BUGABOO OF THE SHORTAGE OF PHYSICIANS IN RURAL COMMUNITIES

Some time ago someone alleged the shortage of physicians in rural communities as an excuse for extending the practice of medicine to those who were not prepared by education or otherwise to assume the duties of physicians. For quite a while no one took the trouble to investigate the facts, and all the raft of people who want to be "doctors" without proper education began to use the statement as an excuse for their existence.

This bugaboo grew so rapidly and to such proportions that in some places it is reported that nurses carried with them prescriptions signed in blank by accommodating doctors and when they visited a patient they could both prescribe and serve as nurse.

We are now beginning to see the facts. Report after report from investigators in different States all show that the rural medical service problem is a small one and is not due to a shortage of physicians but to the same facts that prevent isolated small centers from enjoying fine local theaters, fine high school buildings and other expensive facilities economically possible only to larger groups.

There are 150,000 educated physicians in the United States, or approximately one to each 800 of population. New York has a physician to each 680 people and, although the bugaboo of shortage of doctors thrived more in that State than elsewhere, a recent careful survey shows the problem to be largely in the minds of those who wish it so.

This same story was started by the same interests in California, but was promptly exploded. California has more physicians to population (one to 508) than any other State and more than any other country in the world. There is in the State no serious problem of shortage of physicians, unless we expect each family to have its own pet doctor. San Francisco has an educated physician to each 400 inhabitants; Los Angeles is about the same.

If all the sick people in the State patronized only educated physicians, and if every clinic in the State were suddenly abolished, the doctors of the State would have an average of some five patients of all classes a day each. About one per cent of the adult population of the State is engaged in "curing" or "preventing" disease.

THE AMERICAN MEDICAL ASSOCIATION SESSION

At this writing the seventy-fourth annual session of the American Medical Association is in its closing day in San Francisco. The registration has been the largest of any meeting held on the Pacific Coast; the program has been unusually interesting and attractive; the exhibits have been numerous and well displayed in the large Civic Auditorium; publicity has been excellent, and apparently all the national officers and delegates, as well as our California Fellows, have a right to feel pleased over the accomplishments of this convention.

The social features have been such as to occupy all the spare time of the delegates and guests. The atmosphere of the meeting has been of the best, and we feel that everyone will look forward to another meeting to be held in San Francisco.

A more complete report of the session of the American Medical Association, as well as that of the State association, will appear in the August number of the Journal.

CERTIFICATE OF MERIT TO THE LEAGUE FOR THE CONSERVATION OF PUBLIC HEALTH FOR ITS SCIENTIFIC EXHIBIT

The committee on awards for the scientific exhibit of the American Medical Association has awarded a certificate of merit to the League for the Conservation of Public Health, in the following words:

"The committee recommends that the League for the Conservation of Public Health of California, for the exhibit relating to hospital betterment, better health service, the State campaign for high standards of medical practice, and for the improvement of laws relating to preventive medicine and the prevention of legislation that would lower the standard of health and retard the progress of medicine."

Sudden Acute Pain in the Shoulders Associated With Acute Pelvic Pain in Women—I. C. Rubin, New York (Journal A. M. A., April 14, 1923), reports two cases in which sudden acute pain in the shoulders was associated with acute pelvic pain in women, and describes this pain as a symptom of ruptured ectopic pregnancy, indicating subphrenic blood extravasation (subphrenic hemoperitoneum). The mechanism by which these shoulder pains in subphrenic pneumoperitoneum are produced is said to depend on the relations between the diaphragm and the suspensory ligament of the liver. When gas displaces the diaphragm upward, the liver is simultaneously displaced downward. The falciform hepatic ligament is consequently stretched, and thus the phrenic nerve is stimulated. As the phrenic nerve has its origin in the third, fourth and fifth cervical cord segments, and as it actually connects with cervical peripheral nerves supplying the shoulder girdle, pain produced in the diaphragmatic area is referred to the shoulders by sensitized cutaneous nerves of the cervical segments. The first case cited by Rubin was one of bilateral shoulder pains, more intense in the left shoulder in which the pains were caused by a ruptured tubal pregnancy on the left, with a large amount of extravasated blood. In the second case severe pain in the right shoulder was caused by a tubal abortion on the right and moderate blood extravasation.

COUNTY NEWS

CONTRA COSTA COUNTY

Contra Costa County Medical Society (reported by L. St. John Hely, secretary)—The regular monthly meeting of the Contra Costa County Medical Society was held at the Abbott Emergency Hospital Saturday evening, May 26.

The paper of the evening was given by Stewart Irwin of Oakland on the use of insulin. We were very grateful to Dr. Irwin for the privilege of hearing authentic news from insulin, as all the information we had was from scattered articles in the medical literature, but in this case we were getting information from a reliable member of the profession and one that has had the actual experience. Those present were: Miss Agnes Driscoll, proprietor of Cottage Hospital; Miss Yaub of the Cottage Hospital; Miss Plummer, Dr. and Mrs. C. R. Leech, H. N. Belgum, J. T. Brennerman, P. C. Campbell, U. S. Abbott, Denninger-Keser, G. M. Bumgarner, John W. Bumgarner, medical student; C. L. Abbott, H. L. Carpenter, Walter Smallwood, E. R. Guinan, M. L. Fernandez, L. St. John Hely.

MERCED COUNTY

Merced County Medical Society (reported by Brett Davis, secretary)—The regular meeting was held June 7 at Merced. Present: Davis, Mudd, Parker, Lilley, Fountain, McDaniel, and Lee S. Seward of Ahwahnee.

Dr. Seward gave a talk on tuberculosis. F. W. Parrish has removed to Antioch, and was granted a dimit to the Contra Costa County Society. G. S. Scott has sold his practice in Mariposa to J. L. McDaniel of Hornitos, and has moved to Santa Cruz. Dr. Trick has moved from Los Banos to Dos Palos. Frank W. Yocom from San Francisco has entered the practice of medicine at Livingston. Dr. Seward was admitted as a new member. H. Kylberg of Merced Falls will return to Merced July 1 to practice medicine and surgery.

The new Mercy Hospital building is fast being erected in Merced, the tile and framework of the first floor being well advanced.

SAN DIEGO COUNTY

San Diego County Medical Society (reported by Robert Pollock)—The meeting of the San Diego County Medical Society for May 22 featured two papers: First, Dr. Harvey Stallard, "Incorrect Sleeping Postures in Relation to Teeth." This paper was well illustrated by lantern slides which substantiated the points brought out in the text of the paper. The paper showed the various types of malocclusion, which he grouped into three classes: (1) Incisors bunched; (2) The upper jaw protruding; (3) The lower jaw protruding beyond the upper. He then showed how sleeping postures might have causal relationship to various types of malocclusion even when this defect was bilateral. He showed in his pictures children and also adults who sleep with a fist or a pillow crowded against the cheek causing a lingual deviation from the normal tooth position affecting the molars and bicuspid of that side. He also showed the effects of thumb-sucking habits in crowding forward the upper incisors.

The paper was discussed by Newman, Sharp, and Stallard.

The second paper was read by Robert Pollock: "The Influence of Metabolism on Tooth Structure." In this paper he brought out the facts that the deciduous teeth were laid down by the second month of fetal life, and that the permanent teeth were forming in early infancy. Therefore, in order to effect tooth structure, proper diet must be considered for the mother before conception and dur-

ing gestation. Calcium, phosphate, and vitamins A, B, and C are essential in ample quantity. Oral hygiene is important, but impairment of tooth structure comes from within, and oral hygiene will not prevent caries in teeth not properly laid down. This paper was illustrated by lantern slides showing the effect of diets deficient in vitamins, proteins, and fats on the growth of young animals. The paper was discussed by Churchill, Sharp, and Harvey Jackson. At the close of these papers Hoover presented an interesting case of erythema nodosum.

The meeting of June 26 was canceled, in order that members might attend the State and A. M. A. conventions in San Francisco.

SAN FRANCISCO COUNTY

San Francisco County Medical Society (reported by J. H. Woolsey, secretary)—During the month of May the society held five meetings—a meeting of the Committee on Medicine on May 1; a general meeting on May 8; a meeting of the Committee on Surgery on May 15; a meeting of the Committee on Eye, Ear, Nose, and Throat on May 22, and a meeting of the Committee on Urology, May 29. A full program was presented at each of these meetings. Abstracts of papers presented and discussions that have been received by the Journal are:

The Treatment of Diabetes With Insulin. By W. D. Sansum of Santa Barbara.

Following a brief account of the discovery of insulin, Dr. Sansum presented, by means of charts, a brief summary of the results obtained in the treatment of the first 100 cases of diabetes with insulin. In this series were sixty patients whose disease had reached that degree of severity where they could no longer be kept continuously free from sugar and acidosis on any diet. With two exceptions, all of these patients were not only kept continuously sugar-free and free from acidosis, but they were maintained on diets high enough to warrant a continuous gain in weight, some of the patients having gained as high as forty pounds. In this series were two patients who had recovered from coma. Three patients who were seen late in their comatose condition did not recover. The essential points in the treatment of diabetes with insulin were summed up as follows:

The Essential Points in the Treatment of Diabetes With Insulin

In the treatment of diabetes, there are three objects to be attained.

1. The patient should be kept continuously free from sugar in the urine, and the blood sugar should be normal.
2. The patient should be kept continuously free from acidosis.
3. The patient should be nourished as evidenced by a satisfactory weight.

These conditions may be fulfilled, in many instances, by careful dietary procedures, although when a patient's tolerance is very low, continuous bed-rest is necessary to avoid a serious loss of weight. If the disease becomes progressively worse, as it usually does in severe and untreated patients, a stage is finally reached when the patient can no longer be kept free from sugar and acidosis even if the most careful attention is paid to the diet and the patient is kept continuously in bed. Many patients wait too long before beginning careful dietetic management and are, therefore, not given a fair chance to do the best work.

By the use of insulin the death rate from diabetes may be reduced to zero, and patients who would otherwise remain chronic invalids may be restored to health by ample diets in proportion as this specific extract becomes available. It is not a cure for diabetes. Patients will need to exercise greater care than ever with their diets, but since these diets will be ample for their needs, they will be fully repaid for the additional efforts.

In the treatment of diabetes with insulin, there are four conditions that should be satisfied:

1. The sugar-burning or utilizing power of the insulin in grams per cubic centimeter should be known.
2. The patient's natural tolerance should be determined in grams of sugar-formers.
3. The exact value of the proposed diet should be known.
4. The dosage of insulin may then be adjusted to make up the difference between the sugar-formers of the proposed diet and those of the patient's natural tolerance.

The sugar-formers of the diet designated by "G" are 100 per cent of the carbohydrate, 58 per cent of the protein, and 10 per cent of the fat. It has long been known that all starches are changed into sugar during the process of digestion. When the protein molecule is digested it is split into proteoses, peptones, and eventually into amino acids. Some of the amino acids may be changed into sugar while others may be changed into fatty bodies. The neutral fats are the glycerolesters of fatty acids. Glycerine is a sugar-former. The reduction of food values and tolerances to the common denominator sugar-formers very materially simplifies the calculations.

1. The sugar-burning or utilizing power of the insulin should be accurately known. Eli Lilly's iletin is evaluated in rabbit units. Their units have a very constant value, since they use between 300 and 400 rabbits in the standardization of each lot. In our experience, each unit is worth a little more than 1 gram of sugar-metabolizing power. Their H-20 product which indicates twenty rabbit units in each cc. has a sugar-metabolizing power of 25 grams.

2. The patient's tolerance may be determined by diet alone or by diet plus insulin. When diet alone is used the patient is desugarized by partial starvation. When sugar-free, diet additions are gradually made, a diet is eventually found upon which the patient can remain continuously free from sugar in the urine and with a normal blood sugar. Suppose such a diet contains 35 grams of carbohydrate, 38 grams of protein and 83 grams of fat. The sugar-formers of such a diet are 100 per cent of 35, plus 58 per cent of 38 plus 10 per cent of 83 or 35 plus 22.04 plus 8.3 or 65.34 grams. We would say that such a patient has a natural tolerance of 65 grams of sugar-formers.

In the terminal stages of diabetes, patients do not endure starvation well, both because of the existing acidosis and their already marked emaciated condition. Many of them cannot be desugarized by any dietary procedure, since their natural tolerances are too low to permit of even bed-rest maintenance diets. In such cases, tolerances may be determined by diet plus insulin. If the acidosis is not too severe, a patient may be given a bed-rest maintenance diet similar to the above which contains a little more than 1000 calories, with 65 grams of sugar-formers. Small doses of insulin are given at first. The insulin is gradually increased until the patient is continuously free from sugar. Suppose that it requires 60 grams of assistance in the form of insulin to carry the above diet. The patient's natural tolerance would then be 65 less 60 or 5 grams of sugar-formers.

If the patient has a severe acidosis, no attempt is made to measure the patient until the acidosis is controlled. We control the acidosis by giving the patient a diet rich in carbohydrate, low in protein and as free as possible from fat, such as an oatmeal, skimmed-milk diet, using comparatively large doses of insulin which, as it metabolizes the carbohydrate, will in turn metabolize the fat and thus dissipate the acidosis.

3. The exact value of the proposed diet should be known. We consider 80 to 100 grams of protein as ample for the needs of an adult. In adjusting the fat we have followed the formula of Wood-

yatt's optimal diets, never letting the fat actually oxidized exceed two times the carbohydrates plus one-half of the protein. Following this plan, a diet "G" of 65 will carry approximately a 1000 calorie diet, and a diet "G" of 120 will carry a 2000 calorie diet.

4. The adjustment of the dose. Suppose that the natural tolerance of a patient, as determined either by diet or by diet plus insulin, is found to be 65. Suppose that the proposed diet contains 133 grams of sugar-formers. The patient will need 133 less 65 or 68 grams of assistance. Sixty-eight divided by 25 will then equal the number of cc. of the Lilly iletin required, or 2.7 cc. In our experience we have found that in the majority of patients, with an equal distribution of food between the three meals of the day, that five-eighths of the total dose should be given before breakfast, and three-eighths before supper. In this instance we would give 1.7 cc. before breakfast, and 1 cc. before supper.

Walter C. Alvarez of San Francisco discussed the subject of "When Does It Pay to Remove Adult Tonsils? Conclusions derived from the study of 350 cases."

Alvarez reported the after results in over 250 adult tonsillectomies. Seventy-six per cent of those who had had much tonsillitis got good results and, 82 per cent of those who had never had much tonsillitis failed to be benefited. These statistics show that it pays best to remove tonsils for tonsillitis and sore throats. As a general rule it does not pay to remove them simply because they are a little large or because they have cheesy plugs. A tonsillectomy should never be done with the hope of curing a generalized disease, until a careful physical examination has been made.

At the Eye, Ear, Nose, and Throat Section meeting (reported by F. C. Cordes, secretary), E. C. Sewall in charge of the meeting, Leo Eloesser presented a case of carcinoma of the larynx treated by laryngectomy, according to Gluck with a combined tracheotomy. The result was excellent, the patient after a year's time being able to talk in a loud whisper. The points of interest brought out were that the breath sounds were very faint and that in sectioning the trachea a diagonal section was preferable so as to avoid as much as possible a stricture.

R. Ashley presented a case of a carcinoma of the gums in a woman who previously had been operated on for an abdominal tumor. It was brought out that the tumor probably had no relation to the abdominal mass.

J. Bacher presented several cases of simple mastoid operation, one of them a case of facial palsy that cleared after operation. There were signs of destruction of the labyrinth, the caloric tests being absolutely negative.

In the discussion, Graham felt that one could not say at that time that the labyrinth had been destroyed. He had a case that had deafness and the signs of destruction of the labyrinth, and yet after a lapse of three years there was hearing on that side, together with reactions to caloric tests. Must be careful before any radical procedure is followed relative to the labyrinth. He felt that chronic suppurative ears do not necessarily destroy the labyrinth, and that the function may return, even though it is apparently dead.

A number of eye cases were presented by W. F. Swett. Two brothers, age 9 and 10, both had congenital subluxation of the lens of both eyes. The eyes, in addition, showed other congenital defects. A laborer, age 67, reported to the clinic, complaining of gradual loss of central vision in the left eye. Examination showed the right eye to be negative. The left fundus showed a slate-gray oval slightly raised patch in the macular region. By the direct method there was a prominence of three diopters. A final diagnosis of sarcoma of the choroid was made. Another patient was shown that had in the left eye glaucoma complicated by

thrombosis of retinal veins, together with intracocular hemorrhage.

Another patient, age 4, came with the history that her parents observed that, from the time she was able to walk, she was always getting hurt on the right side (evidence of defective vision). Has never complained of the eye, which has in addition never been inflamed. There was no history of trauma. Examination of this right eye showed a yellowish white concave disc-like mass or membrane extending across anterior third of globe, covering the whole central region except for a small, oval area on the external nasal side, in which is seen a yellowish gray, highly vascular mass. Transillumination shows the interior of the eye to be evenly illuminated throughout. Studying the mass from in front with a dilated pupil and a concave mirror shows various phenomena at different angles. At certain angles the mass is seen to be semi-transparent, with layers of media of different refractive index behind which a red reflex and a few retinal vessels could be seen. One has the feeling that he is looking through medias of varying density and not a tumor mass. A diagnosis of pseudoglioma was made and enucleation advised on possibility of malignancy, which cannot be excluded. In the discussion, H. Barkan told of a similar case in which enucleation was advised and done, and where the tumor mass was mesoblastic tissue. He felt that if any signs of inflammation were present that it was not a glioma.

F. Cordes related the case of a five-year-old boy with a similar mass that, on sectioning and microscopic study, showed the tumor mass to consist of detached retina that had been matted together. In his case the history followed a previous meningitis. O. Barkan felt that daily tonometric readings were important, and that the eye should be enucleated at the first sign of increased pressure. H. Cohn questioned the possibility of a cyst.

Swett, in closing, felt that the mass was too far forward to be a cyst. He also questioned if the prognosis was sufficiently good in the event of glioma of so long standing to warrant enucleation.

O. Barkan presented three cases. The first, a case of recurrent ulcers of the cornea, the patient a man of 57, had been treated elsewhere in 1921 for corneal ulcers of the right eye. Within the space of two months, in spite of daily treatments, conjunctival plastic and optical iridectomy, vision had been reduced to counting fingers at ten feet. In July, 1922, patient consulted O. Barkan with a similar affection of the left eye; a small ulcer near the external limbus with a faint gray progressive margin gradually proceeded toward the center of the cornea, resisted all forms of treatment except cautery with the Shahan thermophore at 180° F. Application of the latter on three different occasions finally stopped progression about six months after onset of condition. Shortly thereafter ulceration recurred on the nasal cornea. All previous internal and special examinations had been negative. On recurrence of ulceration the tonsils were removed, following which the eye became pale for the first time in eight months. Further observation will show how much of a role, if any, the tonsils played.

In the discussion, E. C. Sewall related a case of dendritic ulcers of the cornea that recurred for many years and which was finally permanently cured by ethmoid operation. O. Barkan also presented two cases of traumatic subluxation of the lens with glaucoma. In one the glaucoma had been relieved by cyclodialysis and the other was to be operated on by the same method. Hans Barkan showed a collection of books from the Library of the History of Medicine of Stanford University. These books dealt with ophthalmological subjects and included the original volumes of works of Bartich, Beer, Daviel, Javal, Bowman, Desmarres, Scarpa, Ammon, Maitre-Jan and Wentzel. The one of Bartich especially, published in 1500, is full of the most beautiful copper plates illustrating the

then prevalent ideas of the anatomy of the eye and operative proceedings. Beer's volume showed his original methods of cataract-operating. The remaining books were most interesting because of their old and rare illustrations and the curious conception of certain anatomical and operative incidents. These books represent only a very small part of the books dealing with the history of ophthalmological science and only a small fraction of the general library on the history of medicine, which consists of from 5000 to 6000 volumes and contains works in Arabic, Hebrew, Latin, Greek, and the older forms of German and French. A number date back to 1432 and 1497, while the majority are from the sixteenth and seventeenth centuries.

St. Joseph's Hospital Staff Meeting—At the meeting of June 13 Albert Rowe spoke on "Practical Insulin Therapy." An "Eye, Nose, Ear, and Throat Night" was the feature on April 11. C. O. Southard and Roy Parkinson discussed the symptoms in eye and throat diseases in their relation to general medicine. At the May meeting "Diagnosis" was discussed by C. E. Taylor and William Quinn. J. M. Wolfsohn and P. K. Brown also took part in the discussion.

Case records were presented at these meetings by R. M. Berndt (acute osteomyelitis of tibia), O. Laist (carcinoma of ovary), A. S. Musante (gas phlegmon), J. Stowell (hypernephroma), W. T. Cummins (carcinomatosis), Anna Lyle (appendicitis and hydrosalpinx), J. D. McAlpin (Vincent's angina), A. Nagy (pneumonia), and T. Janes (peritonitis), J. T. O'Brien (diabetes mellitus). These were discussed by C. E. French, D. Stafford, W. A. Blanck, G. H. Becker, L. Crow, H. Deering, C. E. Nixon, and H. Wright.

R. Grant reported upon the purchase of books for the library and the donation of volumes by Ethan Smith and R. Parkinson.

A rule has been unanimously adopted that patients shall have records of their histories and physical examinations, excluding vaginal, made by the interns and externs, if the same have not been recorded by the attending physicians twenty-four hours after admission.

St. Joseph's Hospital record has already appeared in May and June and covered the increasing activities of the institution, including the appointment of staffs, formation of a women's auxiliary, A. M. A. convention diagnostic clinics, accrediting of St. Joseph's Hospital by the A. M. A., graduation of nurses, appeal for more student nurses, and staff and other hospital items.

Apparatus for giving oxygen has been installed on each floor. A gas and oxygen outfit has been added to the obstetrical department.

SAN JOAQUIN COUNTY

San Joaquin County Medical Society (reported by H. S. Chapman, secretary)—The regular meeting of the San Joaquin County Medical Society was held May 3, at the Receiving State Hospital, Stockton, with Dewey Powell presiding. Those present were Dewey Powell, Dozier, Haight, McDonnell, McGurk, Thompson, English, Barton Powell, Harry, Tuggle, McCoskey, Hull, Peterson, Margaret Smythe, Blackmun, Holliger, Counzelman, Fred Clark, Walker, Barnes, Ray, and Chapman.

The speaker of the evening was Albert H. Rowe of Oakland, whose subject was "Insulin Treatment of Diabetes."

Following this brief history of the development and preparation of insulin, many interesting slides and case histories were shown, explaining the use of insulin and absolute necessity of dietetic measures along with insulin. Dr. Rowe stated that the mild cases of diabetes did not need insulin, that the dietetic measures would do. He also stressed the necessity of making differential diagnosis between diabetes mellitus, and renal diabetes. He also stressed the necessity of insulin in cases of coma, acidosis,

and children with diabetes. The paper was by far one of the most interesting and enlightening one that was given to the San Joaquin County Medical Society for some time, and the members greatly appreciated the talk and were vitally interested in the subject.

SANTA BARBARA COUNTY

Santa Barbara County Medical Society (reported by A. C. Soper Jr., secretary)—The regular meeting was held Monday, June 11, at Cottage Hospital, President Means in the chair. Guests present were James F. Percy and William H. Kiger of Los Angeles, Paul of the County Hospital, Lenker of San Bernardino, Interns Koetter, Cryst, and Isaacs.

James F. Percy of Los Angeles gave a paper on "A Consideration of the Modern Phases of the Treatment of Cancer." Discussed by Kiger, Ullmann, Pierce, Brush, Nuzum, Schurmeier, and Rexwald Brown.

SONOMA COUNTY

Sonoma County Medical Society (reported by N. Juell, secretary)—A meeting was held June 14 at Santa Rosa with twelve members present, thirteen absent, and three visitors.

Cuthbert M. Fleissner was admitted as a new member. R. M. Bonar delivered a very interesting address on the "Insulin Treatment of Diabetes."

STANISLAUS COUNTY

Stanislaus County Medical Society (reported by R. E. Maxwell, secretary)—The meeting of Stanislaus County Medical Society was held at Waterford, May 11, with the following members and their wives present: B. F. Surrhyne, J. W. Morgan, C. R. Finney, A. M. Field, E. F. Hagedorn, F. R. McKibbin, R. E. Maxwell, C. B. Benson, E. R. Reamer, R. S. Hiatt, E. R. McPheeters, G. Chipman, J. R. Hosmer, C. I. Bemis, Walter Smith.

J. K. Morris was elected to membership.

Following the dinner, Albert H. Rowe of Oakland gave an interesting paper on "Diabetes" with respect to its treatment with insulin.

On June 8 the society met at dinner at the Turlock Club, Turlock, with the following present: Walter Smith, F. J. Peter, E. R. McPheeters, J. K. Morris, R. E. Maxwell, E. F. Reamer, F. R. McKibbin, E. F. Hagedorn, C. E. Pearson, J. L. Collins, N. G. Chipman, C. E. Finney, B. F. Surrhyne, Albert Julien.

After reports of committees, Julian Wolfsohn of San Francisco gave a paper on "Sleeping Sickness or Lethargic Encephalitis."

The Game of Psychoanalysis—Of psychoanalysis it may be said literally, at least in one sense, that it is such things as dreams are made of. Some of us may be tempted to expand the sense of stuff to the significance of stuff and nonsense. But it is more moderate, and more exact, to say that this new scientific notion, like many such notions, divides itself into a smaller element, which may in a more serious sense be called stuff, and a much larger element which might more correctly be called stuffing. Psychoanalysis can no longer be dismissed as a fad; it has risen to the dignity of a fashion, and possesses all that moral authority and intellectual finality which we associate with a particular pattern of hats or whiskers. It stands now in the open street, visible to the man in the street, like some florid and magnificent tailor's dummy outside a tailor's shop. And it is borne in upon me, as a humble passer-by, that it is time that somebody kicked the stuffing out of it.—Gilbert K. Chesterton, the Century, May, 1923.

Nevada State Medical Association

HORACE J. BROWN, M.D., Secretary Nevada State Medical Association, Associate Editor for Nevada

The next annual meeting of the Nevada State Medical Association will be held September 28, 29, and 30.

We are still anxious to hear from those of our members that wish to read papers at our annual meeting, and the secretary is going to be plumb discouraged if somebody doesn't speak up pretty soon. We feel sure that the meeting this year will be as successful as the one last year, and we look for a much larger attendance, but we would like to see the names of about twelve of our own members gracing the program. Every physician is entitled to an annual vacation, and they owe it to themselves, as well as to their patients, to take one. September 28, 29, and 30 will come at the best time of the year for you to get away, so why not plan to attend our meeting as a start for your vacation. We guarantee that any Fellow that comes to the meeting, and stays awake, will return home with a lot of new ideas that will make him more valuable to his patients. And it will probably sweeten his disposition so much that his wife will give up her intention of shooting him, and try to put up with his foolishness for another year. We hope that if your wife sees this she will ask to see your membership card, and if you haven't one for 1923 that she will make you send a check for \$5 to the secretary right away. We know you have good intentions, but they don't help the treasury any, and the old sock needs lots of replenishing in order to put over that barbecue picnic in the right style.

CHANGES IN THE HARRISON NARCOTIC REGULATIONS AND FORM 679

By Hugh O'Connor,
Former Chief Deputy, Narcotic Division, First
California Internal Revenue District

In accordance with Treasury Decision 3426, approved January 12, 1923, a change has been made in Article 117, which should be of special interest to physicians and druggists and which at the same time does away with a lot of needless worry on the part of the patient and his relatives.

The change has to do with the physician prescribing for an incurable disease such as cancer, advanced tuberculosis or any other of the diseases well recognized as coming within this class. It will be remembered that, under regulations heretofore existing, the prescribing physician was required to write upon the prescription the name of the incurable disease and any other historical data tending to throw light upon the use to which the contemplated purchase of narcotics was to be put. In other words, it required the doctor to write a death warrant on every prescription when called in to prescribe in any one of the cases of incurable diseases.

So, too, in the case of the attending physician prescribing for an aged and infirm addict, whose collapse from the withdrawal of the drug would result in death. In such cases the physician was wont to indorse upon the prescription that the patient is aged and infirm, giving the age, and that drug is necessary to sustain life.

But that was the old method and not infrequently tended to hasten the grief to a patient's immediate family, as well as to the patient himself, and acted as a continual reminder that the case was well nigh hopeless.

The more practical and up-to-date method is the one embodied and contemplated by the change outlined in Treasury Decision 3426. Under it the department permits the use of code to indicate the disease for which prescription is being made.

Thus, in cases of incurable diseases where a large amount of narcotics is sometimes prescribed, the new change permits the following notation to be made instead of the exhaustive information heretofore required to be placed on the prescription:

Exception (1), Article 117

This is the code for incurable diseases, such as cancer, advanced tuberculosis, and other diseases well recognized as coming within this class.

The advantages of this procedure are so apparent that they need not here be outlined for the druggist and the physician who has had experience under the method of dealing in these prescriptions. Under the new, the patient is not continually reading his plight, nor is he forever confronted with an eternal nightmare opening to him the vista of an early grave.

In cases of old age and infirm addicts where the drug administered is to sustain life, the notation: Exception (2), Article 117, is sufficient to comply with the new amendment.

Taken as a whole, the amendment absolves the prescribing physician from the necessity of putting a lot of information on his prescription that he deems to be confidential and which, in the opinion of all doctors, is not good for the patient, because of his delicate condition, to see.

Numerous instances are within the writer's memory of prescribing physicians tactfully keeping the patient in the dark as to the true nature of his incurable disease, even though it appeared at the time to be a violation of the old regulations requiring full and complete data pertaining to the incurable disease to be placed on the prescription. Here is how it has been done.

The patient calls upon his doctor, and unknown to himself, perhaps, he is suffering from an incurable disease well recognized as coming within the usual class. The doctor hesitates to place the full facts upon the prescription, as regulations then required him to do. He was loath to write to the plain view of his patient the inevitable death sentence.

The doctor steps into another room and rings up the Narcotic Division of the Internal Revenue for advice as to how he should proceed in a case of this kind. The only humane thing to do was to advise the physician to omit the designated name of the affliction, and to give the patient the prescription for the narcotic drugs essential to the proper treatment of the case. The patient departs. It is an easy matter for the doctor to immediately communicate with the druggist, advising him to fill the prescription upon presentation, and that he (the doctor) will be down at once to write in the necessary data and information which the old regulations under the Harrison Narcotic law exacted.

It can be seen at once that the new amendment does away with any such procedure, however commendable it was under the old method. Now, if doctors take advantage of this new form under the late regulation of indicating the exemption, they will have an opportunity of dealing with their patients a great deal more confidentially than was the case under Article 117 before Treasury Decision 3426 was approved and issued.

In Article 119, there is also recorded a noteworthy change. The second paragraph of the article of the revised regulations is now amended to read as follows:

"The druggist who fills a prescription must preserve the prescription for a period of two years from the date indicated thereon."

This mandatory provision eliminates the necessity of procuring the signature and address of the party receiving the prescription, on the back thereof, and at the same time does away with any and all of the following questions druggists used to puzzle over before Article 119 was revised:

"The patient is unconscious, can I get anyone in his place to sign it?"

"Can the delivery boy sign when he takes it out of the store?"

"Can the stage driver sign when he takes it out into the country?"

"Can the clerk in the hotel or janitor in the apartment house sign for the narcotic prescription?"

These were but a few of the perplexing questions confronting the druggist prior to the new amendment. Now the druggist has only to remember that NO signatures nor addresses of the parties receiving the prescriptions are required in order to comply with the Harrison Narcotic Law.

Article 148 pertaining to exempt preparations is amended by striking out the word "signature" and substituting therefor the word "name" both in the fourth sentence thereof and in the heading of the second column of the form therein prescribed of record to be kept by retail dealers.

In other words this means that the druggist is now no longer required to obtain the signatures in cases of sales of exempt preparations. It will be sufficient for him to procure the names and addresses of the purchasers and write them in himself.

No separate form is provided by the Government but any druggist or seller of exempt preparations can use as a model the Form appearing on Page 60 of Regulations 35 by merely substituting "Name of Purchaser" for "Signature of Purchaser" and thereby comply with the regulations as lately amended.

Form 679, styled "REQUISITION FOR BLANK ORDERS," has also been changed. From the size of an ordinary business card it has been enlarged so that now it is practically the size of Form 678, which the registrant uses for his annual registration.

Among the improvements of the new form as enlarged over the old, is a space provided for "Order Forms Issued," "Date of Issue," "Numbers of Order Forms Issued to Registrant" and "Classes Registered In." It will be remembered that in the other forms no such provision was made for this added information.

More space has also been allotted to "Signature of Purchaser." The blank for the insertion of street and number, city or town or state is more than ample and a decided improvement over the old form.

Only one book is allowed on each requisition unless the party is registered in Class 1 or 2. Because of this fact a suggestion to druggists will not be amiss at this point. To insure having the necessary forms it would be advisable to secure a few of the Form 679 for yourself and the doctors as well. Fill one of them out and place it in your order form book at about page seven or eight. When you come to it in due course of business fill in the date and mail it to your local Internal Revenue Office with a remittance of ten cents, the price of one book. This procedure will insure your having a new book before your old one is used up.

Impress this on the doctors you come in contact with, and remind them when you find their last pages of requisitions coming in for narcotics, to set about replenishing their supply of order forms.

The druggist is still required to keep narcotic prescriptions on a separate file for a period of two years from the time of the receipt of the prescriptions.

Fashions and Psychoanalysis—The truth is that the nucleus of genuine psychological study has little or nothing to do with the fashion of psychoanalysis, just as the nucleus of genuine biological study has very little to do with the pantomime popularity of the missing link. In so far as that strictly scientific science really does exist, it has amid its high merits certain marks which unfit it to be a fashion of this kind; just a really subtle medical diagnosis could never express itself in a patent medicine.—Gilbert K. Chesterton, the Century, May, 1923.

BOOK REVIEWS

New and Nonofficial Remedies, 1923, containing descriptions of the articles which stand accepted by the Council on Pharmacy and Chemistry of the American Medical Association on January 1, 1923. Cloth. Price, postpaid, \$1.50. Pp. 415 + XXXVI. Chicago: American Medical Association, 1923.

The progressive, up-to-date physician cannot dispense with the newer remedies, proprietary and non-proprietary. Yet he can neither select them on the basis of the manufacturers' claims alone, nor devote his patients to experiments while he tries out those claims.

New and Nonofficial Remedies is the publication of the Council on Pharmacy and Chemistry through which this body annually presents the American medical profession with disinterested, critical information about the proprietary medicines which are offered to the profession, and which the Council deems worthy of recognition. In addition to the descriptions of proprietary preparations, the book contains descriptions of those nonofficial remedies which the Council deems deserving of consideration by the profession.

A valuable feature of the book is the grouping preparations in classes. Each of these is introduced by a general discussion of the group. Thus the silver preparations, the iodine preparations, the arsenic preparations, the animal organ preparations, the biologic products, etc., each is preceded by a general, thoroughly up-to-date discussion of the particular group. These general articles compare the value of the products included in the group with similar pharmacopoeial and other established drugs which it is proposed that these proprietary preparations shall supplant.

A glance at the preface of this volume shows that the book has been extensively revised. In fact, each edition of New and Nonofficial Remedies is essentially a newly written book, brought up to date by those who speak with authority on the various phases of therapeutics.

Physicians who wish to know why a given proprietary is not described in New and Nonofficial Remedies will find the References to Proprietary and Unofficial Articles not found in N. N. R. of much value. In this chapter (in the back of the book) are given references to published articles dealing with preparations which have not been accepted.

New and Nonofficial Remedies should be in the hands of all physicians who prescribe drugs. The book contains information about the newer materia medica which cannot be found in any other publication.

The book will be sent postpaid by the American Medical Association, 535 North Dearborn Street, Chicago, on receipt of one dollar and fifty cents.

The Form and Functions of the Central Nervous System. An introduction to the study of nervous diseases. By Frederick Tilney, M. D., and Henry Alsop Riley, M. D. Second edition. 1019 pages. Illustrated. New York: Paul Hoeber. 1923. Price \$12.00.

The American medical profession has done itself credit in making a reprint of this splendid work necessary within less than two years from its first publication. The authors have seized the opportunity "to correct typographical and other errors usually found in first editions" and to make minor changes, including some suggested by readers. In the main the book is unchanged.

There is no work extant which quite fills the place which this does and it is an inexhaustible source for reference for the neurologist, as well as

for the general practitioner and the student in search of full information. The paragraphs on symptomatology and the discussions of the principal syndromes connected with the different subdivisions of the cerebro-spinal axis, together with the case histories and autopsy reports, make its practical value inestimable. Glossary and bibliography put the finishing touches to a work which has added immensely to the prestige of American neurology.

The press work of the second edition is improved, both text and illustrations standing out more sharply than in the first edition. This is no doubt due to the change in paper. The volume is more compactly bound than before, but still has the distressing weight of six and a quarter pounds, from which no escape can be suggested.

E. W. T.

Bronchoscopy and Esophagoscopy. A manual of peroral and endoscopy and laryngeal surgery. By Chevalier Jackson. 356 pp. Illustrated. Philadelphia and London: W. B. Saunders Company. 1922.

In this little book of 310 pages, Jackson covers in general the same ground to which he devoted 710 pages in his "Peroral Endoscopy." The more recent work is designed as a manual of technic but the author included considerable of a clinical and theoretical nature. These are the most unsatisfactory parts of the book, for example the discussion of the nature of cardiospasm.

There is no discussion of instrumentarium or technic except as in use at Jackson's clinic. Those who prefer other methods will accordingly find the book very incomplete. The chapter on gastroscopy does not fully reflect the present status of this procedure and could be omitted entirely without serious loss.

The definite stamp of the author's personality is evident throughout the work and is a welcome feature. His "do's" and "don'ts" may be a little epigrammatic but they contain a lot of sense. However, there are dogmatic statements which are not endorsed by all workers and which might not have the full endorsement of all physicians. For example, the condemnation of blind bouginage of the esophagus for any purpose is contrary to the experience of many physicians who find this a valuable procedure. It is open to discussion whether bouginage is more dangerous than esophagoscopy. The insistence on sterile technic is not in conformity with universal opinion as the author states. For esophagoscopy, at least sterilization of the instruments after use, meets all reasonable requirements. The recommended use of 20 per cent cocaine solution as a local anesthetic without admixture of adrenalin is a hazardous departure from the methods of some of the best clinics.

In general, we may say that as a presentation of Jackson's methods this work is excellent. As a scientific monograph on the subject it leaves much to be desired.

G. F. H.

Diseases of the Nervous System, a Text-Book of Neurology and Psychiatry. By Smith Ely Jelliffe, M. D., and William A. White, M. D. Lea and Febiger, Philadelphia and New York, 1923.

The broad conception of disease in general and neuropsychiatry in particular held by the authors is well known and appreciated by a large body of physicians.

The fourth edition just issued holds to these broad principles and applies them in diagnosis and treatment of individual conditions.

In the preface to the new edition, the authors have defined their purpose—a purpose they have held constantly in mind throughout the book. They have conceived "it to be of much greater importance to reflect in their work the major tendencies which are operating throughout the field of neuropsychiatry, so that the student will not only have pre-

sented to him a reasonably complete statement of the accepted body of facts as they now exist in this branch of medicine, but that he will be enabled to grasp the meaning of the various movements that are pushing neuropsychiatric thought forward into new territories. In other words, the authors have not been content with presenting a certain amount of pabulum, so to speak, for the absorption of the student, but have endeavored to produce a book, which, if conscientiously used, will stimulate his thought."

W. E. M.

BOOKS RECEIVED

Internal Medicine. A work for the practicing physician on diagnosis and treatment with a complete desk index, in three volumes, illustrated with 427 text illustrations and fourteen in color. Medical diagnosis in two volumes, by James C. Wilson, M. D., emeritus professor of medicine and clinical medicine in the Jefferson Medical College, and emeritus physician to its hospital, assisted by Creighton H. Turner, M. D. Volume III, Treatment, by James C. Wilson and Samuel Bradbury, M. D., member of the faculty of the Cornell University Medical College; visiting physician, New York City Hospital, etc. Philadelphia and London: J. B. Lippincott Co.

Applied Psychology for Nurses, An Introduction to. By Donald A. Laird, assistant professor of psychology, University of Wyoming; lecturer in nursing psychology, Ivinson Memorial Hospital School of Nursing. Illustrated. J. B. Lippincott Co., Philadelphia and London.

Optotypes. Consisting of test-letters and pictographs for measuring the acuteness of vision. By John Green, M. D., professor of ophthalmology in St. Louis Medical College (Washington University), 1886 to 1913, and A. E. Ewing, M. D., professor emeritus of ophthalmology in Washington University. With thirty-five engraved plates. St. Louis: C. V. Mosby Co., 1923.

Tonsillectomy. By means of the alveolar eminence of the mandible and a guillotine, with a review of the collateral issues. By Greenfield Sluder, M. D., clinical professor and director of the Department of Rhinology, Laryngology, and Otology, Washington University School of Medicine, St. Louis. Ninety illustrations. St. Louis: C. V. Mosby Co., 1923.

Epidemiology and Public Health. A text and reference book for physicians, medical students, and health workers, in three volumes. By Victor C. Vaughan, M. D., emeritus professor of hygiene in the University of Michigan, assisted by Henry F. Vaughan, Dr. P. H., commissioner of health of the city of Detroit, and George T. Palmer, Dr. P. H., epidemiologist for the department of health of the city of Detroit. Volume II, Nutritional Disorders, Alimentary Infections, Percutaneous Infections. St. Louis: C. V. Mosby Co., 1923.

The Tonsils, Faucial, Lingual, and Pharyngeal, with some account of the posterior and lateral pharyngeal nodules. By Harry A. Barnes, M. D., instructor in laryngology, Harvard Medical School. Illustrated. Second edition. St. Louis: C. V. Mosby Co., 1923.

Cerebrospinal Fluid in Health and in Disease. By Abraham Levison, M. D., associate in pediatrics, Northwestern University Medical School, with a foreword by Ludvig Hektoen, M. D. Sixty-nine

illustrations, including five color plates. Second edition, thoroughly revised. St. Louis: C. V. Mosby Co., 1923.

Text-book of Therapeutics, including the Essentials of Pharmacology and Materia Medica. By A. A. Stevens, M. D., professor of applied therapeutics, University of Pennsylvania, Philadelphia. Sixth edition, entirely reset. Octavo of 793 pages. Philadelphia and London: W. B. Saunders Co., 1923. Cloth, \$6.25 net.

Medical State Board Questions and Answers. By R. Max Goepp, M. D., professor of clinical medicine at the Philadelphia Polyclinic; assistant professor of clinical medicine, Jefferson Medical College. Fifth edition, thoroughly revised. Octavo volume of 731 pages. Philadelphia and London: W. B. Saunders Co., 1923. Cloth, \$6 net.

First Aid X-ray Atlas of Fractures and Dislocations, including illustrated description of the skeleton. By H. C. Orrin, surgeon, ministry of pensions Orthopedic Hospital; late civil surgeon the Third London General Hospital. New York: Paul B. Hoeber, 1923.

First Aid X-ray Atlas of the Arteries. By H. C. Orrin, surgeon, ministry of pensions Orthopedic Hospital; late civil surgeon to the Third London General Hospital. Paul B. Hoeber, New York, 1923.

MEDICAL ECONOMICS

Why not let our advertisers help you?

Commercial Exhibits at the A. M. A. Convention—We feel sure that many of our advertisers have helped you by the splendid exhibits they displayed during the recent American Medical Association convention in San Francisco, and that the promise of the director of exhibits, as published in the A. M. A. Daily Bulletin, has been more than lived up to by many of our advertisers:

"While it is true that commercial houses exhibit at the convention now as in the past, essentially to promote the sales of their various wares, their salesmanship is of a different quality from that found in dealing with other consumers. It is grounded primarily on service and helpfulness to the medical profession. The salesmen are not mere trades people, but in most cases trained, scientific experts, inventors, research students, many of whom have devoted a lifetime of intelligent effort and study to improving the apparatus, pharmaceutical products, and technical equipment used in your daily practice.

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"WILL C. BRAUN,
"Director of Exhibits.

"RENE BINE, M. D.,
"Local Chairman of Exhibits."

The Journal knows that you will remember with profit and pleasure the exhibits of the Abbott Laboratories, American Laundry Machinery Co., Arlington Chemical Co., W. A. Baum & Co., Bausch & Lomb Optical Co., Bischoff's Surgical House, George W. Brady & Co., G. W. Carrick Co., Wilmot Castle Co., Cutter Laboratories, Hanovia Chemical Co., Hittenberger Co., Horlick's Malted Milk Co., Hynson, Westcott & Dunning, Laboratory Products Co., Maltbie Chemical Co., Mead Johnson & Co., Medical Protective Co., Mellin's Food Co., Pacific Was-

Sermann Laboratories, Radium Chemical Co., Radium Co. of Colorado, Reid Bros., Sanborn Co., Boston; R. L. Scherer & Co., G. H. Sherman, Taylor Instrument Co., Travers Surgical Co., Victor X-ray Corporation, Vulcan Electric Co., Walters Surgical Co., Wedekind Co., Wilson Laboratories.

There were also fine exhibits by many firms who have been among our advertising friends in the past and whose co-operation we hope to have again in the near future.

DEDICATED TO
HARRY MITCHELL SHERMAN,
FROM GRADUATE NURSES OF THE
CHILDREN'S HOSPITAL
WHO VALUE HIS GREAT BENEFACTIONS
OF SERVICE
TO THIS INSTITUTION,
AND REVERE HIS NAME,
FOR ITS INSPIRATIONAL IDEALS
WHICH INFLUENCED THE GROWTH
AND DEVELOPMENT
OF THE
SCHOOL OF NURSING,
SAN FRANCISCO, 1922
1885-1921.

This memorial tablet was dedicated and placed at the Children's Hospital on April 25, 1923. The invocation was by Dean Gresham and the presentation by Miss Goodhue. Dr. George J. McChesney accepted the tablet on behalf of the hospital, and the exercises were closed with a eulogy of Dr. Sherman's great service to humanity, by Dr. James B. Cutter, who said:

"He learned self-government, and not to be led aside by anything, and cheerfulness in all circumstances, as well as in illness, and a just admixture in the moral character of sweetness and dignity, and to do what was set before him without complaining, I observed that everybody believed that he thought as he spoke, and that in all that he did he never had any bad intention, and he never showed amazement and surprise, and was never in a hurry, and never put off doing a thing, nor was perplexed nor dejected, nor did he ever laugh to disguise his vexation, nor on the other hand was he ever passionate or suspicious.

"He was accustomed to do acts of beneficence, and was ready to forgive, and was free from all falsehood, and he presented the appearance of a man who could not be diverted from right, rather than a man who had been improved.

"This is the portrait of Harry M. Sherman, as gleaned from the life of Marcus Aurelius, to whom he has been likened, and whose memory we are assembled here today to honor, by the installation of this beautiful bronze tablet, which is to be placed in the 'Little Jim ward,' a spot closely and tenderly associated with Dr. Sherman's professional and personal life.

"We realize that while Dr. Sherman has

passed away, his deeds have not passed away, and his individuality remains among us.

"The encouragement for us, in contemplating his life, lies in the fact that he did not live for himself alone, rather that in his active and unselfish life he typified a noble race, reflecting in all he did, those fine qualities which we admire and try to emulate.

"Honorable with a type of integrity, peculiarly personal as an attribute, yet kind and generous in his judgment, with a severe self rule and discipline, yet tender in his regard for the rights and sensibilities of others, he was called by one who loved him much, 'Anax Andron,' King of Men, thus characterizing his attainments and his virtues.

"Harry M. Sherman rated so far above the rank and file of men with whom he lived and worked, that like other men of whom I think of similar attainments, he suffered during his life time from lack of their full appreciation of the height of his endeavors, and the purity of his purposes.

"To be called his friend conferred a blessing and distinction.

"Dr. Sherman, in concert with Dr. Charlotte Brown, gave the forward impulse to the Children's Hospital in its early years, and by his long and brilliant service made it as it will be for all time the center of orthopedic surgery on the Pacific Coast.

"So, in honoring him we use the words of one of his closest associates and dearest friends, 'Honor is an external adjunct, and pertains rather to the honorer than to the person honored.'

"We can not do anything to change Harry M. Sherman. He has gone beyond the boundaries of time and space, but by honoring him a change is wrought in us, and by a contemplation of what he was, both in excellencies of character and in the purposes and accomplishments of his life, we clarify our own souls and stimulate ourselves to follow his example."

FIFTY YEARS OF NURSING

Nurses have recently celebrated the fiftieth anniversary of nursing as a profession in the United States. The first school of nursing in this country was founded at Bellevue Hospital, New York, in May, 1873. The development and growth of these schools is indicated:

Year	Number of Hospital Schools	Number of Students
1880	15	323
1890	35	3,985
1900	432	11,164
1910	1,121	29,805
1920	1,755	55,000

During the fifty years, about 164,000 have graduated as nurses, and it is estimated that some 75,000 are practicing their profession. There are about 15,000 nurses engaged in public health work and some writers believe that this number should be increased to 50,000.

In looking over the mass of comment called forth by the mid-century celebration one feature stands out prominently and significantly: Some of the writers feel that the greatest accomplishment of the profession is throwing off the yoke of physician and hospital control and reaching the place where they are "grouped with medicine, law and theology as one of the learned professions." Other speakers consider that this place has not been reached and never should be. They believe that the great future of nursing requires that they hold to the position of technical assistants to physicians in preventing and treating disease.

All well-wishers of nurses realize that much of the future growth and usefulness of the profession depends upon the right solution of this their greatest problem.

Pharmacology and Therapeutics

COUNCIL ON PHARMACY AND CHEMISTRY OF THE A. M. A.

(Reported by W. A. Puckner, Secretary)

The following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion in New and Non-official Remedies:

Abbott Laboratories—Neutral acriflavine (Abbott); tablets neutral acriflavine (Abbott), 0.03 gm. ($\frac{1}{2}$ gr.); enteric coated tablets neutral acriflavine (Abbott), 0.03 gm. ($\frac{1}{2}$ gr.).

Hynson, Wescott & Dunning—Phenoltetrachlorophthalein (H., W. & D.); ampules phenoltetrachlorophthalein (H., W. & D.).

Powers-Weightman-Rosengarten Co.—Carbon tetrachlorid C. P. (P.-W.-R.).

Non-proprietary articles—Neutral acriflavine; carbon tetrachloride medicinal.

Parke, Davis & Co.—Pollen extract ragweed (P., D. & Co.); pollen extract timothy (P., D. & Co.).

Non-proprietary article—Insulin.

NEW AND NON-OFFICIAL REMEDIES

Tincture No. 111 Digitalis (P., D. & Co.)—A fat-free tincture of digitalis which, standardized by the minimum lethal dose frog heart method of Houghton, is 50 per cent stronger than tincture of digitalis, U. S. P. The actions and uses of tincture No. 111 digitalis (P., D. & Co.) are the same as those of tincture of digitalis. It was introduced at a time when the "fat" of digitalis was believed to cause gastric disturbances. This claim of superiority is not tenable and the preparation is sold simply as a standardized tincture of digitalis. To minimize deterioration through light and air, the preparation is marketed in one ounce amber vials and saturated with carbon dioxide. Parke, Davis & Co., Detroit, Mich.—Journal A. M. A., April 7, 1923, p. 1003.

Carbon Tetrachloride C. P. (P. W. R.)—A brand of carbon tetrachloride medicinal (N. N. R.). Powers-Weightman-Rosengarten Co., Philadelphia.—Journal A. M. A., April 21, 1923, p. 1143.

Modified Pneumococcus Vaccine—A vaccine or "antigen" prepared by digesting a suspension of pneumococci, types 1, 11, 111, and group 4 at 37 C. until about 95 per cent of the organisms have become gram-negative and the mixture is relatively non-toxic to guinea pigs. It is believed that this method yields a vaccine with greater protective power. There is some evidence that this vaccine is of value in the treatment of lobar pneumonia. It is not intended for prophylactic use.

Pneumococcus Antigen (Lilly)—A modified pneumococcus vaccine (N. N. R.). It is marketed in 5 cc. vials, each cc. containing twenty billion partially autolyzed pneumococci. Eli Lilly & Co., Indianapolis, Ind.—Journal A. M. A., April 21, 1923, p. 1143.

Neo-Silvol—A compound of silver iodid with a soluble gelatin base, containing 18 to 22 per cent of silver iodid in colloidal form. Neo-silvol, even in concentrated solutions, causes neither irritation of mucous membranes nor coagulation of albumin. It does not stain the skin. It is claimed that neo-silvol in laboratory tests for germicidal value has been found as effective as phenol in its action on bacteria. Neo-silvol is intended for the prophylaxis against, and treatment of infections of accessible mucous membranes and is claimed to be indicated in affections of the genito-urinary tract and of the eye, ear, nose, and throat. Parke, Davis & Co., Detroit, Mich.—Journal A. M. A., April 28, 1923, p. 1218.

Phenoltetrachlorophthalein (H., W. & D.)—A dibasic dye formed by the condensation of phenol and tetrachlorophthalic acid or its anhydride. Phenol-

tetrachlorophthalein has been used for the determination of the functional output of the liver. It can be used, in the form of the sodium salt, intravenously, but cannot be given subcutaneously or intramuscularly. The substance may also be obtained in the form of ampules phenoltetrachlorophthalein containing a solution of disodium phenoltetrachlorophthalein. Hynson, Wescott & Dunning, Baltimore, Md.—Journal A. M. A., April 28, 1923, p. 1218.

Neutral Acriflavine—It has the actions and uses of acriflavine (see New and Non-official Remedies, 1923). Being neutral in reaction, it is claimed not to have the smarting and irritating effects of acriflavine solutions. Neutral acriflavine is a brownish-red, odorless, granular powder. It is soluble in less than two parts of water, forming a brownish-red solution which fluoresces on dilution and which has a bitter taste. The Abbott Laboratories, Chicago, Ill.—Journal A. M. A., May 19, 1923, p. 1455.

Neutral Acriflavine (Abbott)—A brand of neutral acriflavine (N. N. R.). It is sold in substance and also in the form of tablets neutral acriflavine (Abbott), 0.03 gm., and enteric coated tablets neutral acriflavine (Abbott), 0.03 gm. The Abbott Laboratories, Chicago, Ill.—Journal A. M. A., May 19, 1923, p. 1455.

THE COMMUNITY CHEST

Its Advantages and Disadvantages—(As Summarized by Mr. Frank Chapman in the Modern Hospital)

Advantages Enumerated—A. Relief from financial worry and the consequent release of the executive officer for really executive duties is the most invariable primary advantage given.

B. Next in order of importance, in the opinion of those who have furnished information, is the opportunity for community education, i. e., the disseminating of the idea of community philanthropy to the community as a whole. The annual drive presents a medium for placing the needs of the philanthropies of the community before the general public in much better form than has been possible in the past.

C. As a corollary to this, is the opportunity for communal participation, or, in the words of one of the leaders of the Cleveland Community Chest, "spreading the base" of the philanthropic giving of the city. To illustrate specifically this point, fourteen years ago less than 4600 people gave \$5 or more to the philanthropies of Cleveland. (This does not enumerate those giving to the Catholic charities.) Today close to 177,000 give to the same group of agencies.

D. Next in importance is given the co-ordination of the work of the various agencies. The elimination of overlapping and the stimulation of a spirit of friendly co-operation between various groups engaged in the same type of work unquestionably bespeak a higher degree of professional efficiency.

E. With the close check-up of the financial performance and the publicity given vital records of the hospital, there is unquestionably a stimulation to higher standards of business efficiency. This is accomplished in the centralized purchasing bureaus, the formulation and use of standards of purchase, the centralized collection of accounts and many other activities that have been and are being developed in these various communal groups.

There are of course in any scheme as large as this inherent disadvantages; and these disadvantages as given by those who have furnished the information are listed below:

Disadvantages Given—A. The possibility of creating an impression that there is an inexhaustible supply of funds. To illustrate this point specifically, the chairman of one Community Chest has called attention to the fact that out of every dollar spent in hospital operation in 1914, thirty-one cents was contributed, while in 1923, the contribution demands for the hospitals of the same community is forty-seven cents per dollar spent.

Such a statement is food for very serious thought, and but emphasizes the necessity of the closest possible scrutiny of the budget demands of the individual agencies, and a rather autocratic allocation of funds to take care of the services of the various hospitals.

B. Loss of personal touch. This is expressed in the fear that by reason of the amalgamation of the philanthropic appeal of the community the particular friends of the hospital will lose sight of the intimate operation of that institution.

C. Improper distribution of funds. This is expressed in the statement that is made by one hospital that a larger amount of money in proportion to services rendered was furnished to another hospital than it obtained. This point again emphasizes the absolute necessity of conscientious, scientific management of the Fund and the general acceptance of the equity of that administration by the Community Chest as a whole.

D. The creating of a feeling of ownership by contributors. This thought is expressed by one superintendent, calling attention to the fact that residents of the community are making demands by reason of their contribution to the Community Chest. (If the author may be permitted the comment, this is an advantage rather than a disadvantage. Certainly it would seem highly desirable that our citizens think in possessive terms of their hospitals.)

E. Sacrifice of popular agencies. This thought is expressed by an individual who says that unquestionably individual agencies with a popular appeal can get more money individually than they could by participation in the Chest.

Commenting editorially upon the three articles of which Chapman's is the last, the editor of the Modern Hospital says:

"Whatever untenable attitude of individualism hospitals may have taken in the past, they must henceforth take their place with the other social welfare agencies of the community, and through co-operative planning and work assist in eradicating the abuses of miscellaneous and unrelated social work, in establishing high standards of service and kindred activities.

"Just how far hospitals are already participating in this community organization movement as it now exists in about 125 American cities we have no means of knowing, but some conception of the degree of this participation may be gained from the figures gathered by Mr. Chapman from the ten cities from which he sought information for the basis of his article. In three instances the hospitals do not participate in the financial federation of their community. In the remaining seven instances the approximate percentage of budget requirements of the hospitals provided for by the community chest runs from ten to twenty-seven per cent. In three instances only a limited number of hospitals participate."

Sad Comment Upon Medical Licensure—California licensed 405 graduates of low-grade medical colleges, the largest number licensed in any State during the last six years. The next largest numbers licensed were 177 in Illinois, 150 in Arkansas, 149 in Connecticut, 146 in Massachusetts, 141 in Missouri, and 120 in Colorado.—From editorial in Journal of the American Medical Association, April 28, 1923.

The Board of Medical Examiners will hold a regular meeting at Native Sons hall, 414 Mason street, San Francisco, July 9 to 12 inclusive, for the purpose of holding examinations, legal hearings, and other business that may properly come before the board.

C. B. PINKHAM,
Secretary-Treasurer.

TRANSFERRED

J. A. McKenney, from Fresno county to Alameda county; Charles R. Fancher, from Stanislaus county to Alameda county; Harry Auslen, from Contra Costa county to Alameda county; William F. Priestley, from San Joaquin county to Alameda county; C. E. Harrison, from San Bernardino county to Los Angeles county; James E. Harvey, from Yuba-Sutter county to Los Angeles county; Carl S. J. Tillmanns, from Imperial county to Los Angeles county.

NEW MEMBERS

Clovis—Earl B. Newton.

Madera—Ray R. Dearborn.

El Centro—F. W. Peterson.

Maricopa—Mervyn F. Rand.

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Williams—Ney M. Salter.

Colusa—W. T. Rathbun.

Visalia—C. L. Wilmoth.

Sacramento—Charles E. Thompson.

Berkeley—Gurdon Potter.

Oakland—Frank Ray Missner.

DEATHS

Barnes, Henry E W. Died at Santa Ana, May 30, 1923, age 74. Graduate of the State University of Iowa College of Medicine, Iowa City, 1873. Licensed in California in 1901. He was a member of Orange County Medical Society, the State Medical Society, and the American Medical Association.

Neff, Francis F. Died at Concord, June 17, 1923, age 61. He graduated from the Jefferson Medical College, Philadelphia, 1887. Licensed in California in 1889. Dr. Neff was a member of the Contra Costa County Medical Society, the State Medical Society, and the American Medical Association.

Orr, James Lawrence. Died at San Diego, May 7, 1923, age 44. Graduate of the Medical College of the State of South Carolina, Charleston, 1901. He was a member of the South Carolina Medical Association and the American Medical Association.

Rogers, Benjamin H. Died at San Diego, May 2, 1923, age 60. Graduate of the Jefferson Medical College, Philadelphia, 1888. Licensed in California in 1922. He was a member of the San Diego Medical Society, the State Medical Society, and the American Medical Association.

California State Journal of Medicine

OWNED AND PUBLISHED MONTHLY BY THE CALIFORNIA MEDICAL ASSOCIATION

BALBOA BUILDING, SECOND AND MARKET STREETS, SAN FRANCISCO

Editor	-	-	-	-	-	-	-	-	-	W. E. MUSGRAVE, M. D.
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Superintendent of Publications	-	-	-	-	-	-	-	-	-	WILLIAM H. BARRY

VOL. XXI

AUGUST, 1923

No. 8

ORIGINAL ARTICLES

RESPONSIBILITY FOR STATEMENTS AND CONCLUSIONS IN ORIGINAL ARTICLES

The author of an article appearing in the JOURNAL is entirely responsible for all statements and conclusions. These may or may not be in harmony with the views of the editorial staff. Furthermore, authors are largely responsible for the language and method of presenting their subjects. All manuscripts will be carefully read, but editorial privileges will be exercised only to a very limited extent. It is believed that the manner of presentation of any subject by any author determines to no small degree the value of his conclusions. Therefore, both the author and the reader, in our opinion, are entitled to have the subject as presented by the author as little disturbed as possible by the editors. However, the right to reduce or reject any article is always reserved.

SOME RESPONSIBILITIES AND DUTIES OF MEDICAL ORGANIZATIONS *

President's Address, California Medical
Association

By THOMAS CLAY EDWARDS, Salinas

I would like to tell you just how much I appreciate being president of the California Medical Association. Words are, however, wholly inadequate, so I will have to ask you to think all the good things possible, all the nice things possible, and then maybe you can guess how I feel. I know that my election as president is a compliment to the country doctor, and I am very happy in the realization that I was selected to represent him.

I am not fully qualified nor have I the desire to discuss the scientific problems of medicine and surgery, as they are dealt with by the various specialists. If I can say something that will give the members a better idea of society problems, I will be satisfied. I do not mean the things that are dealt with during our annual meetings, but rather the affairs of our association that arise from day to day and are cared for by your officers and committees.

* Delivered at the 52nd Annual Meeting, California Medical Association, at San Francisco, June 23, 1923, by the incoming President of the Association.

I have served on the Council for a good many years, and I sometimes think if the members realized just how difficult it is sometimes to get their co-operation, it would be of service to our association. And what I may say is not in a spirit of criticism, except for constructive purposes. And did I offer any other kind of criticism, it would amount to pure cussedness on my part.

In order that this association may function wisely and to the greatest advantage to all, it is quite necessary that we have a unity of purpose, an understanding of conditions, and a desire on the part of all to work unselfishly for the good of the profession and the public.

The Journal, which was published for many years at a loss, has been placed on a paying basis, and made the pride of every member of our association, by the editor. It has been made the official organ of the Nevada and Utah State Medical Associations, and your officers have had invitations to extend still further its usefulness. This alone speaks volumes for the character of the scientific matter being published in it. In fact, without undue egotism, we may say that there is not a State journal published that excels it in any way.

At these annual meetings, we (the officers that you have chosen) try to inform you as to the true state of affairs and give you accurate information upon which to elaborate policies and re-energize our purposes. If at any time there are questions that you wish answered, if you will write or visit the secretary's office, you will find the records and services of your officers at your command. You must remember that it is your association, that the officers chosen are yours, and that they and the committees are looking out for your interests. Your officers and committee men consider it a distinguishing honor to serve you; otherwise they would not work as they do fifty-two weeks in the year. I will not mention the labor of the Council for the reason that I have been a member, but I can tell you something about the work done by your Publicity Bureau or Executive Committee.

It meets every two weeks and has under consideration all matters—personal, legal, ethical, and

business—pertaining to your affairs. The chairman of the Council attends these meetings, also Mr. Peart, whose solicitude for our best interests is known to all. I wish for your own benefit you could visit a few of these meetings. The quantity, character, and variety of the work done by it is amazing. I attended one conference of this committee to prepare for its regular meeting, and this conference lasted three hours. It took an hour and a half the next day to finish the work. Were not medical men actuated by the greatest amount of altruistic spirit, you would not find it possible to get this work done. This is the same character of service that is rendered by other committees. I wish to mention one of these because I feel that you should know somewhat more of it than appears in the report as given here by its chairman.

I refer to the Committee on Industrial Accident Insurance Work. This committee was appointed years ago. It had numerous meetings with the Industrial Accident Commission and other carriers. Its reports to the Council, which were numerous, covered various angles of this most important question. The facts ascertained and reported by this committee were most voluminous, and, as a member of the Council at that time, I was impressed with the idea that this committee was well informed, had a broad vision of conditions, and was well qualified to give this association advice as to the possibilities of the future and the remedies that seemed available. My judgment is based on two things: First, the members of this committee are men of good judgment who gave unstintingly of their time in making investigations. Second, the investigations were made solely for the purpose of determining what was, to their minds, best for physicians and for the disabled employe.

I think the members living in the cities might profit considerably if they would talk with the members of this committee. So far as the members in the country are concerned, it makes little difference what action is finally taken, for the carriers must use available men, and the supply is frequently not large enough to give much choice.

The last score of years has made the world a very small place; travel has been made more rapid and easy; the radio is plucking messages out of the air from every quarter of the world and broadcasting to every other part of the world. So have conditions in the medical world changed.

Forty years ago, practically every doctor all over the country, save in the largest centers, and many times even there, was doctor, surgeon, obstetrician, ophthalmologist, gynecologist, pediatrician, neurologist, and genito-urinary surgeon all in one. He did not know, however, that he was all of these. He put out his shingle, "Physician and Surgeon," and he did not hesitate to do anything from lancing gum boils or catheterization of the nasal duct to cataract extraction and major amputations. He was all sufficient and did not

need to fraternize with his competitors, for they were competitors indeed, and in truth. When he needed help, he called on some good mother in Israel for her assistance. Frequently he gave the anesthetic, trusted the continuance of it to some relative or friend, and then proceeded to do all kinds of work without any other assistance. Is it surprising that there was not the fraternalism in those days that there is today? In truth, the feudalism that still remains in some places among physicians has been handed down to us by a virile lot of honored and respected progenitors.

These men traveled horseback, with a buckboard, with a cart, and later with a horse and buggy, sometimes two horses, and their calls extended over vast reaches of desert, prairies, and out through the hills into the roughest of mountains. No road was too long, no night too stormy, and no trail too rough. The like of such service will not be seen in this country again.

But conditions have changed, and we must adapt ourselves to things as they are and not as they were. As medical men and women, we must keep abreast of the time in which we live. We must read the signs of the times, and these all point toward the rapid growth of the get-together spirit. It is this coming together of the various parts and the activities of these parts, independent of the trade, profession, or calling of each, that makes for the big uplift of humanity. The business world sees this, and if we fail to grasp and hold fast to it, we will fail to make the best of our opportunities. Others get together—why not we?

Among our activities we have a most valuable organization which is a natural bridge between physicians and the public. The public demands, and justly, that we give it more of our confidence and help in matters socio-medical. In the past, this has been an undeveloped field. We have confined our activities to the study of disease and its relief or cure. The public asks that more attention be given to general health matters in relation to mass health and mass health conditions, but our education has been such that we have confined our activities largely to health matters individually, and not collectively.

The League for the Conservation of Public Health is this bridge, and I think it is filling a place made necessary by the rapid changes that have taken place in the world of late. Had our education been more comprehensive, had we been taught more legal medicine, had we been taught more about our relations to society, had we been taught that we were a part of the body politic, and as such owed it something, we might not be so sadly in need of the services of such an organization as the League. But even then, activities have multiplied so rapidly that we could not have done without it.

And in passing, I must say that it is too bad that some education intended to develop men with administrative ability has not been a part of the

curriculum of our medical schools. Such men are needed as administrators in hospitals, in all kinds of public health positions and as secretaries for national and State medical organizations. As it is, there is a dearth of material with which to fill such positions.

I am pleading for a closer relationship between physicians and the public and between physicians with each other, both in and outside of the medical society meetings. This is necessary, if we expect to meet the influences that are directed against scientific medicine and surgery. It is common experience in other fields of endeavor, that the development of this camaraderie is doing more for business and the ethics of business than anything else that has been tried. Rubbing elbows with the other fellow, even if you do not like him, putting your feet under the same table, singing the same songs—in short, doing these commonplace things together—make him appear more likable. We appreciate the value of putting up a unified front in nearly every line of endeavor, but when one suggests that doctors fraternize more, the door opens and a breeze from some mammoth cold storage plant chills the atmosphere.

In dealing with things scientific, we are honest, earnest, open-minded. We have a frank desire to know the truth. Our reasonings follow very closely along mathematical lines. But what a different animal (I use that word wittingly) we are when we undertake to study any of the personal relationships that meet us at every turn in the road. In our study of biology, of anatomy, of chemistry, of hematology, we exhibit a cool, deliberate, stable, and analytic mind. In a study of our relations with each other, we start sometimes with a bias based on prejudice and distrust. Science is forgotten, and all the emotions of our nature run rampant, chasing one after the other without let or hindrance. Humanity is not a cold, lifeless thing, but a very fervid, emotional, and ever active entity.

This we have to reckon with and make allowance for when we undertake to smooth out uneven places along the pathway of life. Generally we are animal enough to think that these uneven places are the direct result of some other animal trying to make things hard for us. If viewed with our scientific mind, we might find that they are obstructions that we have put there ourselves endeavoring to make it harder for the other fellow, while our good sense tells us that the easier we make it for the other fellow, the smoother things move for us. No matter how hard we try, it is practically impossible to be fair and honest and just when once our sentiment is involved in any question we are studying, but it may temper our judgments, when we are studying any of our personal relationships, if we will remember that this is a common frailty.

It is axiomatic today, that the richest fruit is plucked from the tree of service. Let us bury our inherited and occasionally antagonistic individualism and rear in its place an ever-living co-operative fraternalism.

"EUGENICS" FROM A PHYSICIAN'S STANDPOINT*

President's Address, California Medical Association

By HENRY G. BRAINERD, Los Angeles

I wish at the outset of this address to offer the thanks of the State association, as well as my own personal thanks, to W. E. Musgrave for his very efficient services throughout the year as secretary of the society and editor of the Journal, also to compliment him as chairman of the Committee of Arrangements for the meeting of the A. M. A., for the great success he has made in carrying out the arrangements. He has shown his customary thoroughness, not only in the local preparations, but also in the arrangement for nearly two hundred diagnostic clinics scattered all the way from Santa Rosa to San Diego. As this is the first attempt of the A. M. A. to hold clinics of this character in connection with their regular meetings, it required an immense amount of work on his part to complete these arrangements. One important feature of the arrangements was the preparation and distribution of "Medical California," a beautiful and informative auxiliary program and book of information about California, which was done most satisfactorily. These undertakings for the State association, as well as for the A. M. A., have all been performed by Dr. Musgrave without any compensation, excepting the consciousness of a great work well done for our profession. The sickness and necessary absence of Howard Johnson, the association secretary, from his duties, increased the burdens of the secretary until the society was fortunate enough to secure the services of Emma W. Pope, M. D., who has rendered most efficient service as acting secretary. I doubt if many members of our association appreciate how much work is transacted by the Councilors of the society, and especially by those who are members of the Executive Committee, viz., Rene Bine, chairman; W. E. Musgrave, T. C. Edwards, J. H. Parkinson, Emma Pope and Hartley Peart, who have held nineteen meetings during the year and transacted a great amount of business for the association.

Our association has met a great loss in the death of C. G. Kenyon, who for nearly fifty years has been an active and very useful member, and for many years past has been the efficient president of the Board of Councilors.

The success of the osteopaths and chiropractors in the late election giving them separate licensing boards has opened the gates for a horde of poorly prepared practitioners to enter the field of medicine and to assume the title of "doctor." It seems unfortunate for the public that the Governor failed to sign the bill passed by the Legislature defining the titles of professional men.

I am much disappointed to learn from the association's attorney, Mr. Peart, that the proposition to carry on the Indemnity Defense Fund under a regular insurance charter would probably have to be abandoned.

* Presented at the 52nd Annual Meeting of the California Medical Association, San Francisco, June 23, by the retiring President of the Association.

In my final appearance in the official position with which you have seen fit to honor me, I wish to arouse your interest in the subject in which I have for a long time taken great interest, and one that seems to me of great importance, namely, the subject of eugenics.

EUGENICS

A study of the draft statistics of the late war shows that there were examined by the various draft boards 5,758,000 men between the ages of twenty-one and thirty inclusive, and there were found unfit for service 1,289,000 men, or 22 per cent. The same defects which were found in these men would probably be found in a like number of women of the same age, so that it is safe to say that one out of five of the population of that age is physically or mentally unfit, and were they under the control of a successful stock breeder would not be allowed to propagate. This information came to me as a shock, and led me to investigate the character of these defects. Physical defects, undersize, overweight, imperfect vision and hearing, flat feet, etc., making them unfit for army service, are much less serious as far as breeding is concerned than the mental defects which are so likely to descend to the offsprings.

Investigation of the mental defectives in this number, 1,289,000, shows that they were distributed as follows: Psychoses, 583; psychopaths, 1436; psychoneuroses, 1660; dementia praecox, 2096; feeble-minded, 39,095; epilepsy, 14,195; paresis, 4018; syphilis, 19,144, making a total of a little over 82,000. Pierce Bailey reports that there were sent to the army hospitals in France 1475 feeble-minded which should be added to the 82,000. Numerous cases of epilepsy were passed by the draft boards, but were later discovered while in the service, and are not included in the above figures. As I have seen in private practice five such cases, the total must reach into thousands. Very little laboratory work was done in the draft examination, so that thousands of syphilitics must have escaped detection by the draft boards. I find no record of the tabetics, and it is not stated that they are included in other classifications. This would add other thousands to the above list. The number of paretics is much greater after thirty than before, which would increase the number of unfit in the population of child-bearing age.

It is probable that there are less syphilitics in the female population between twenty and forty-five than in the male, but the many fathers beyond forty-five who are syphilitic would counterbalance this difference, so that the ratio of 82,000 of these mental defectives to the number of 5,758,000 men examined is too low a ratio to apply to the number of men and women between the ages of twenty and forty-five, which by the United States census of 1920 was 22,401,000 men, and 21,895,000 women, and taking this low number of mental defectiveness, 82,000, found among the men between twenty-one and thirty, as a ratio for determining the number in the whole population, makes a total of 656,000 men and women between

the ages of twenty and forty-five as unfit to become parents, and this is probably many thousands short of the actual number existing in the population. While syphilis, of course, is not necessarily a defective mental condition, however, the offspring of syphilitics are so largely defective mentally that I have included them among the mentally unfit.

The reports of hospitals for the insane show that tubercular patients are very likely to have mentally defective offsprings, so we must consider the probably defective offspring of the tubercular in addition to the 656,000 abnormal mental cases. There were 80,601 rejected by the draft examination because of tuberculosis, which will practically double the number unfit for parentage, making the enormous number of 1,312,000 whose offspring will furnish the great majority of our tuberculars, feeble-minded, insane, paupers, prostitutes, and criminals. It adds to the seriousness of the situation that the mentally abnormal are much more prolific than their mentally superior neighbors, as they have neither the knowledge nor self-restraint to exercise birth-control. It is learned from this investigation of the draft records that the proportion of these unfit is much greater among the foreign born than among the native born.

Mendel's Law of Inheritance, as extended by Rosanoff to apply to psychopaths, demonstrates that:

1. Both parents psychopathic, all of the offspring will be psychopathic.
2. One parent normal with psychopathic taint from grandparent, and the other parent psychopathic, half the offspring will be psychopathic and the other half normal, but liable to have psychopathic offspring.
3. One parent normal with normal ancestry, and the other parent psychopathic, all of the offspring will be normal, but liable to have psychopathic offspring.
4. Both parents normal but each having psychopathic taint from grandparent, one-fourth the offspring will be normal and one-fourth psychopathic, the others normal but liable to have psychopathic offspring.
5. Both parents normal but one with psychopathic taint from grandparent, all the offspring will be normal, but half of these may have psychopathic offspring.
6. Both parents normal with pure ancestry, all offspring normal, and not liable to have psychopathic offspring.

The examination of the official reports of sixteen reformatories scattered through as many States where investigation of the mental status has been made, show that 65 per cent of these inmates are feeble-minded.

Reports of the prisons in seven States where like investigations have been made show that an average of 54 per cent are mentally defective. Examination of jail inmates in many places throughout the land has shown that mentally defectives form more than 50 per cent of the total jail population, is stated by the National Committee for Mental Hygiene.

The psychopathic laboratory of the municipal court in Chicago in the examination 4460 prostitutes found 80 per cent of them mentally defective. A Massachusetts committee investigating white slave traffic found in 300 prostitutes examined that 87 per cent of them were mentally below the age of eleven years. In the Albany courts it was found that 56 per cent of the prostitutes were mentally defective. The national committee for mental hygiene, after examination of

many poor houses, county farms, and like institutions for the care of paupers, reports that the mentally deficient are more than 30 per cent of all the inmates.

H. M. Pollock, member of the New York State Hospital Commission, states that "one in twenty-five of the population at some period of life becomes insane." The United States census shows that from 1890 to 1920 the number of insane had increased from 118 per 100,000 of population to 220, and that their care and economic loss yearly amounts to more than \$200,000,000, and that "mental deficiency, epilepsy, pauperism, and crime cause still greater annual loss to this country."

In a number of families that have been investigated in recent years—one, the Jukes sisters—it was found in 1891, 700 of their descendants, whose histories were investigated, there had been 140 criminals in jails and prisons, 280 paupers and all the others undesirable citizens, and that the family had cost the State of New York \$1,308,000 up to 1891.

John Ishmael and his half-breed wife came to Indiana about 1840. He is supposed to be a descendant from some of the criminals deported to America from England prior to 1770. Gradually others of the same type, and from the same source, came to Indiana and largely intermarried among their kind. The outstanding characteristic of the whole tribe, which is known as Ishmaelites, was feeble-mindedness, licentiousness, thieving, begging, and a wandering life. Two years ago their numbers were estimated to exceed 10,000 scattered through the Middle West, few of them self-supporting, none of them desirable citizens, most of them securing a living by stealing, begging, prostitution, and living in jails, poor houses and prisons, and by public charity, living in any way except by work.

Investigation of the "Nan" family was found in eight generations of descendants to number now over 850, and they are characterized by crime, drunkenness, prostitution, pauperism, and mental deficiency, and have cost the State of New York over \$1,400,000.

In contrast to these defective families, which have brought disgrace to our land, was the attempt to improve the human race by selective generation, which was made by the Oneida Community, a religious sect founded on the idea of attaining perfection. In this experiment the young people attempted to bring about human regeneration by scientific generation, and to that end, before marriage, the couples were examined by a committee, two of which were physicians, as to their mental and physical and spiritual fitness to bring forth offspring. Ninety-eight children were born under this plan during the years between 1869 and 1879. None of these were born deaf, dumb, deformed, or idiotic. There was, however, one who received a depressed fracture of the skull at seven years of age, who was retarded in his after mental development, but since maturity has been self-supporting by working on a farm or

in a store, and one by birth-injury has had some muscular inco-ordination, but is mentally normal, and is an efficient foreman. Up to September, 1921, fifty-two years since the beginning of this experiment, but six deaths had occurred among these children—one from brain tumor, one from scarlet fever, one from aneurism, and three from accident, only 13 per cent of the average death rate in the United States during those years. The parents (eighty in number) of these children showed marked longevity. Eight died between twenty-nine and fifty-five, forty-four died between fifty-five and eighty-nine, and twenty-eight were still living over seventy in 1921, demonstrating the care which the committee exercised in their selection. In this Oneida experiment there have been no criminals, no prostitutes, no paupers, no drunkards, no insane, and only one retarded mentally by reason of injury to the head, all of these good citizens helping to sustain the State instead of impoverishing it.

These statistics can be extended indefinitely, which show that the insane, paupers, prostitutes, drunkards, and criminals come largely from the ranks of the mentally abnormal, and, unfortunately, they are increasing at twice the rate of the general population.

As most of preventive medicine has come through the investigation, and efforts of the regular medical profession, so now we must look to our profession in this great branch of preventive medicine.

As the Panama Canal Zone was rid of the pestilence of fever by eradicating at its source the breeding of a special kind of mosquito, so must the mentally abnormal be prevented from breeding their kind. It is the duty of the medical profession to urge that the medical schools teach the law of Mendel and imbue their students with the idea that the prevention of mental abnormalities should fill a large place in the efforts of preventive medicine. It is the duty of our profession to educate the public that the mentally abnormal breed their kind, and to arouse their interest in securing proper marriage laws, to secure larger provision for hospitals and schools and colonies for this class of people, thereby diminishing crime, imbecility, insanity, and pauperism, making it less necessary to spend so much as at present on our hospitals for insane, poor houses, reformatories, and prisons. It is the duty of the medical profession to urge the repeal of the laws against birth-control. Every child has a right to be well born, and parents who are not fit or able to take care of children after they have come, should not bring children into the world, and the physically and mentally fit people owe it to themselves, and to the State, to raise as large families as their means permit.

Irving Fisher says: "If birth-control exercised by individual parents could itself be controlled by a eugenic committee, it could undoubtedly become the surest and most supremely important means of improving the human race. We could breed out the unfit and breed in the fit. We could in a few generations conquer degeneracy, dependency, and delinquency and develop a race

far surpassing not only our own, but the ancient Greeks."

Stopes of London stated in a public address that "constructive birth-control is the key to all racial progress, the only safeguard to international peace."

S. Adolphus Knopf, who has made a very comprehensive study of tuberculosis, says, "had the United States attacked the tuberculosis problem from the eugenic side as well as the environmental, I believe the result in the reduction of our tuberculosis death rate would have been so startling as to arouse the hope of the absolute eradication of the disease. What the world needs now is not a greater, but a better, population, which can only be attained by birth-control."

In fifty years Holland by birth-control has increased the average height of its men of draft age four inches, it has lowered its death rate from tuberculosis in eleven years from 184 per 100,000 to 144, and has lowered the general death rate more than any other country.

Haven Emerson, formerly Health Commissioner of New York City, said "any physician who does not give advice to his patient which will, if followed, effectually save her from any surgical risk is not living up to his responsibilities, and whenever the patient's health might be jeopardized by the unavoidable risks and strains of pregnancy such patients may, according to my understanding of the law, be informed as to how to avoid conception."

Most of the urban schools of our country have some medical supervision, and the schools are the places where the psychopaths and feeble-minded can be early detected. Their school record should be kept so if they show delinquency and come before the juvenile court, or other courts, their history may be known and proper disposal of their cases may be made. To do this, there should be a court psychiatrist to determine whether the delinquent is mentally abnormal or not, and, if abnormal, and may be restored to normalcy by proper treatment, he should be sent to a hospital. If found to be feeble-minded he should be sent to a vocational school where training and discipline may enable him to become self-supporting, and returned to his home and kept under the supervision of a parole officer. Should he continue to show criminal tendencies he should be placed in a colony where he may be wholly, or partly, self-supporting, and yet enjoy in a large measure the comforts and pleasures of life, instead of, as by our present method, spending much of his time in jails and prisons, and between terms breeding his kind.

In a Boston municipal court one hundred boys were investigated and it was found that in five years preceding they had been arrested 1825 times, had been put on probation 432 times, but less than one out of four successfully stayed out his probation.

Nine of the United States—Michigan, New York, North Dakota, Oregon, Pennsylvania, Washington, Wisconsin, Vermont, and Virginia—have laws against issuing marriage licenses to

physically unfit, but these laws are rendered ineffective by failure to make the examination for the health certificate sufficiently careful and complete. Such certificates should be given by a competent board after thorough mental and physical examination, this board preferably under the control of the State Board of Health, and the services should be paid for by the State.

An effort is now being made to introduce into all the States uniform marriage laws to prevent the marriage of the unfit, and we trust that this movement will be supported by the medical profession. It will be a long step in the right direction.

The question of sterilization of the unfit is a very important one. All eugenists agree that the begetting of offspring by the mentally unfit should be prevented, but some urge segregation instead of sterilization, but at the present time in the United States only one-tenth of the mentally defective are being segregated in hospitals, schools, and colonies, and it would seem that both segregation and sterilization should be brought to bear on the problem. I believe that every male who becomes a charge on the State by reason of insanity, feeble-mindedness, or crime should be sterilized before being discharged from the State's care. I do not need to tell this audience that sterilization of the male is a very simple operation, with practically no danger, and does not prevent copulation, but does prevent procreation.

The sterilization of the female is a little more difficult operation than in the male, but, done under modern surgical procedure, the risk of serious complication is negligible, and I believe it should be done on every mentally defective female who is under the State's care, and who has not yet reached the menopause, before she is permitted to leave the State institution.

To summarize, it seems to me the members of the medical profession must give their best efforts to this great undertaking along the lines of preventive medicine, and that they should urge our National Government to scan more closely the immigrants, and rigorously reject those mentally unfit. Also, to secure uniform marriage laws requiring a clean bill of health requisite to procuring a marriage license, should urge the repeal of the present laws against birth-control and to give scientific information to their patients in regard to the same, should urge, also, the enactment of laws requiring sterilization or segregation of the unfit who are in the custody of the State, and provide hospitals and vocational schools and colonies sufficient to care properly for the unfit requiring such care, and thus diminish the expenditures for asylums, jails, and prisons. In support of the propaganda of birth-control our profession should help to educate the general public as to the inexorable character of Mendel's law that "like breeds like."

By a combination of all these efforts I believe it is possible to bring about such change in coming generations as will prevent our beloved country from perishing in a mire of insanity, degeneracy, poverty, immorality, and crime.

REMINISCENCES OF THREE EMINENT
SAN FRANCISCO PHYSICIANS*

By WILLIAM FITCH CHENEY, M. D.

From the Department of Medicine, Stanford University
Medical School

Most of the men prominent in the medical profession in San Francisco during the twenty years from 1880 to 1900 have finished their work and passed on. It is fitting to recall what they were and what they did, that this generation may have a proper appreciation of those who prepared the way for them. In the limits of a paper presented here it is impossible to do more than select a few of these pioneers for consideration; and I have chosen three whom I knew best and of whom I can speak from intimate personal acquaintance. There are a number of others of the same period equally worthy of remembrance, but they must be left for another time and for other observers to recall.

One of the greatest men that ever adorned the medical profession in San Francisco was, by universal consent, Dr. Levi Cooper Lane. His memory is respected and always will be, not only by the people whom he served and their descendants, but equally by the many members of the medical profession in this generation, now in active practice, who were students in the days of his greatest fame and who received instruction from him. This man had peculiarities as well as attainments that impressed him firmly on the minds of those who met him often; and he stands out prominently from others of his day.

Always he was dressed in a fashion not seen at the present time—black broadcloth suit with coat cut double-breasted and long tails, worn unbuttoned; immaculate white linen, black bow tie, boots (never shoes) highly polished. I have seen him at five in the morning called to perform tracheotomy on a child with diphtheria; or during the forenoon at his home where he sat surrounded by pet birds and entertaining himself with the odes of Horace; or at his lectures at the college; or in his office during a long afternoon with patients; but always he was dressed the same, never tousled or rumpled or unclean. He wore his white hair cut long in the neck, with moustache and chin beard also of white, exactly as in the bust of him that adorns Lane Hall. In manner he was short and abrupt, quick to reach a conclusion, never hesitating about expressing his conviction; sometimes frightening by his bluntness people who did not know him well, but after all kindly in heart, never cruel, only not wishing to waste time in useless explanations when he had so much to do.

Whatever greatness he achieved, and by common consent he was the greatest surgeon of his day on the Pacific Coast, he earned by hard work. He was not only a student of books and knew well the literature of his profession; but a constant student of the human body, keeping his private dissecting room at the college where he frequently worked even until the later years of his life; and where it was his custom to perform first on the cadaver any unusual operation before he risked

the life of his patient by it. How he was able to do the large amount of private practice he did, to lecture to students three times a week, to give to the preparation of his lectures the amount of research that they showed, to attend to the affairs of the college that he had founded in memory of his uncle; and yet with all this to find time for reading of the classics and general literature, was always a mystery to the younger men who knew him.

In his day medical teaching was largely didactic; and his lectures on surgery were certainly wonderful in the completeness with which they covered the ground, the clearness and explicitness with which they made the student familiar with details, and the human interest with which he always managed to clothe his subject. He constantly mixed in with the scientific information that he imparted, good advice about morals, thrift, attention to duty, and the high character the medical profession was expected to maintain. He had also a large number of anecdotes drawn from his own experience, with which to illustrate his subject and relieve the tension of serious topics.

He lived before present-day surgical methods had been adopted. He operated frequently in private homes, taking down a door and placing it across two supports for his operating table; doing even capital operations in such crude surroundings with good results. There were no hospital facilities then, and most of his cases were cared for either in rooms above his office on Mission street or at a boarding-house around the corner on Third street. Many a man now in practice, but then an assistant in his office, can recall critical nights spent with his patients after operation, to control hemorrhage or prevent a heart from stopping its work after anesthetic and shock. Anesthetics were given as a routine by student assistants even in private cases; with a cone made from a face-towel and a newspaper, and a famous mixture of alcohol, chloroform and ether, the A. C. E. formula, in which he had great faith. For antisepsis, he depended on boiling his instruments and appliances; and the use in preparation of a patient of a solution of bichloride in alcohol and water which he had the patient provide in advance in gallon bottles. Those were the days of "laudable pus." Even so ordinary an operation as ligation of a vessel was followed by suppuration, and this was expected. And yet in spite of all these methods that seem to us now so crude, he had results and successes that made his name famous all over the world as a great surgeon; and that make him remembered still as one of the brightest stars that ever shone in the constellation of San Francisco professional men.

His name is perpetuated in the hospital he founded, in the auditorium in the college building where he spent so much of his time in work, and in the library which now is the largest west of Chicago. But even without these memorials he would long be remembered for his personality, his knowledge, and his achievements in his profession; and would retain a place in the hearts of the many students who listened to his teachings.

* Read before the San Francisco County Medical Society, May 9, 1923.

After graduation from medical college I spent my first year as assistant to Dr. Clinton Cushing; for there were no internships in those days, and a young man, feeling the urgent need of practical experience before undertaking private work, considered himself fortunate if he could obtain association with an older practitioner for a time. This physician was also a remarkable character, well entitled to the attention he attracted. His specialty was gynecology, and during the '80s and '90s he was the leader in his field.

To meet his patients in the afternoon he always wore a full dress suit, as if for an evening function, and this never failed to impress women who flocked to him in large number for treatment and advice. He was a man of distinguished appearance and aristocratic manners. Quite bald except for the conventional rim of white hair around the head, with white moustache and goatee, always carrying himself as if he owned the world, he was certain to command attention and respect. Even in the forenoon, for his clinic and his operations, he dressed in formal cutaway coat and striped trousers, never in the present-day sack suit; but in his office, and for his lecture hour, always he appeared in the dress suit.

His office was in his home, at Sutter and Taylor streets, beautifully furnished and calculated to impress by its elegance. He had traveled much abroad and brought back with him tapestries, vases, pictures, and works of art that were everywhere in evidence. These he took pleasure in showing to his patients, whom he treated much as if they were his guests, making their visits a pleasant remembrance in spite of the disagreeable experience they often had to undergo, from examination and local treatments. Those were the days of routine treatments by tincture of iodine to cervix and vaginal vault, with glycerine tampons packed in afterward for depletion; of the almost universal use of pessaries for retroversion, anteversion, and uterine prolapse; of electricity for fibroid tumors and for all sorts of pelvic pain; and of various local applications and manipulations now pretty thoroughly discarded. But to his office crowds of women came daily for these treatments and his reception room was always full.

His operations were done either in his own home, where he kept rooms for patients on upper floors, or else at the patient's home, for in those days hospital facilities were few. If it was to be at the patient's home, not only a complete operating kit was carried along, ready for use, but a folding table for the operation, antiseptics and dressings of the kinds he employed. For a number of years his favorite antiseptic was beta-naphthol, a crystalline powder he dissolved in hot water, for his instruments, for bathing his hands, for the field of operation. In every abdominal operation, regularly he would fill the abdominal cavity with a hot solution of this antiseptic before closing the incision in the wall. This solution was kept ready in a large pitcher, assistants lifted up the wall by the edges of the incision, the solution was poured in until the abdomen could hold no more, then emptied by compressing the walls and the wound closed by silk-worm gut sutures.

Dr. Cushing's reputation as a gynecologist was well deserved. He was thoroughly well-informed by study and by visiting the best operators abroad and observing their ways. He was always ready to attempt whatever method was new, if it promised better results. He was absolutely fearless and undaunted, never losing his calm assurance in any emergency, meeting difficulties in his work with a smile and with determination to overcome them. Above all, he was faithful to his patients. Many a night, worried over some operative case of the previous day, he would get up and make a visit to see if all was well, no matter what the hour. No amount of attention or service was too great in any serious case. By this care and by his manner, which always inspired confidence and hopefulness, as well as by his skill in technique, he had wonderful success and achieved a name as the best gynecologist of his time in California.

His lecture hour for medical students was late in the afternoon, at 4:30. A few minutes before or after that time he would come dashing up to the college in an open barouche in pleasant weather or a closed brougham on stormy days. His driver was in livery and his horses were a pair of spirited bays. Soon afterward he came marching into the lecture room with head up, shoulders back, hands full of instruments and appliances for demonstration, always interested in his subject, always entertaining and fascinating in his presentation of it. With his knowledge and aristocratic bearing, his sense of humor and the nature of his subject, he always attracted students and they seldom "cut" his lectures. Aside from the discussion of medical and surgical gynecology, his talks were full of good advice to young men about their habits of life. Particularly did he impress the doctrine of cleanliness. Over and over he would give the admonition "don't be a dirty doctor"; and a favorite saying of his was that the coat of arms of the physician should be a nail-brush and a cake of soap. He constantly urged young men to beware of the pregnant woman seeking an abortion, assuring them that no rewards of any kind could repay a man for violating his conscience and the law. All in all his teaching was a great asset to students and many now in practice no doubt recall him to this day with affectionate regard.

After leaving Dr. Cushing, and after attempting private practice for a few months with dubious results, I was happy to receive an offer from Dr. Henry Gibbons, Jr., to live in his home and act as his assistant. At that time he was in large private practice, with more obstetrical work than any other man of his day; and he certainly needed help in order to get even a few hours sleep by night. The months I spent with him in this capacity as assistant, and the subsequent years I was more or less intimately associated with him until his death, are looked back upon as the happiest of my life; and in common with many others I have never ceased to miss him since he passed away.

When first I met Dr. Gibbons I thought he was the ideal physician; and this conviction only grew stronger and stronger as the years went by. When

I entered medical school he wore a long brown silky beard, that with his kindly brown eyes and his dark brown abundant hair and his friendly smile made him one of the most handsome of men. He also dressed in those days in the conventional black broadcloth double-breasted Prince Albert suit; wore a large expanse of white shirt front beautifully ruffled; his necktie was always a white lawn bow; and his boots, for he likewise never wore shoes, were highly polished at all times, never soiled. He never appeared outdoors except in a high silk hat. I knew this man for twenty years after those first impressions in student days. Gradually his beard was trimmed shorter and shorter and grew more gray; his hair became thin and gray; little by little he exchanged the broadcloth formal dress for a cut corresponding more nearly to the business sack suit of today; his neckties became black instead of white; and his high silk hat was exchanged for the ordinary black derby. But to the end his eyes retained their kindly twinkle, his smile was always as reassuring and his manner as quiet and inspiring of affection as in the days when years had not yet modified the beauty of his youth.

How he managed to do all the work he did was always a matter for wonder to all his associates. To begin with he was the typical family physician, on call at all hours of the day or night, for any member of the family, for any sort of ailment. Worst of all, his special work was obstetrics; and at a period in medical history when all such cases were attended at their homes, and there were no automobiles. His statistics of labor cases ran up into thousands. No one in his day had as much of this work to do as he. But as if this enormous practice was not enough for one man's time, he was also professor of obstetrics and dean at Cooper Medical College. In his capacity as teacher he lectured regularly three hours a week to students, besides the hours given to preparation and revision of his lecture notes. In his office as dean of the college, he had to take charge of the admission of all students, the record of their fees, the records of their standing in every subject taught, the preparation of the annual announcement of the college for the printer, the arrangement for commencement exercises. He was the man to whom all students went with grievances and complaints as well as with questions about their work and their standing. At all times they found him patient and just and willing to aid; so that no man in the faculty was more beloved than he. But how he kept up under the constant strain of practice and teaching and official duties was almost incomprehensible. His life proves that hard work does not kill; for he lived to advanced years and would have lived longer yet, had it not been for injuries to his head received in an auto accident.

His day's routine will give some idea of the amount that he accomplished. No matter how much of the night had been spent on a labor case, if he got home at all he was on hand for breakfast as 8 o'clock with his family. Soon after that he was in his carriage and on his rounds among

patients, of whom he always had a long list. Back for lunch by one or a little before, he was soon thereafter in his office downstairs in his residence, where usually the waiting room was full. Here he worked until about 4 p. m., when he left for his lecture at the college or for visits to patients or for both. After his evening meal, for which his arrival was indefinite, he was back in his office for evening hours which again kept him busy until a late hour.

In spite of this constant rush of work, this man was never irritable or impatient. He never grew angry, he never became resentful even when manifestly imposed upon; he was always sweet and kindly in disposition; he never refused his services at any time to anybody, whether rich or poor, or of whatever social standing. Everybody trusted him, everybody felt the utmost confidence when he entered the sick-room that all would be done that could be done, everybody loved him for his manner and quiet spirit of friendly interest as well as for his good judgment and skill in his professional work. He was of Quaker descent; he used no alcohol or tobacco; he never used profane language; he really had no bad habits of any kind, except overwork. He was as unselfish and as devoted to his profession as any man that ever lived; and his memory remains to this day as an inspiration to all who knew him.

Such is the character of the men who lived just before us. Their ideal was service, which they inculcated not only by their precept but by their example. It is the tendency of each generation to think they do things better than their predecessors; but do we, after all? Perhaps by dwelling once in a while on the achievements and the attainments of those who came before us, we may become a little more humble and a little more eager to do at least as well as they.

Americanism—Americanism is not a matter of birth or ancestry, for the American is self-made, not born. Americanism is not a birthright privilege, but a lifelong responsibility.

America is not a place, not a religion, not a locality; America is an atmosphere, an ideal, a vision not yet fulfilled.

No man is an American who does not place America first, before himself. He must serve America; America must not serve him. No man is an American who is not possessed of a genuinely democratic faith—that is, trust in the people and such devotion to the commonwealth as sets the benefit of all above the advantage of one or some. He who holds democracy to be the rule of the mob is not a democrat, whether his forbears came to Massachusetts in 1620 or he to New York in 1910. He is no American who is a democrat on parade. He is no American who cherishes prejudices, whether these be social, or racial, or religious.

All this is only another way of saying that an American is a conscious, vigilant, fraternal, unwearyed creator of America who scorns the notion that America bears a charmed life, and that democracy, even though it be of the American brand, guarantees the automatic solution of its own problems.—Rabbi Stephen S. Wise, *Colliers*, March 17, 1923.

HEART FAILURE*

By RAY KENT BARRY, M. D., San Diego, California.

Several years ago newspapers and periodicals amused themselves with jests about deaths from "heart failure." They were not untimely, for it was obvious to the layman that, in the last analysis, all deaths are due to heart failure. It was clear if a man's heart stopped beating his life would cease, no matter what the underlying cause might be. It is, and always has been, unscientific to give "heart failure" as the cause of death, as it is obvious that it has no meaning. Notwithstanding all this, the term "heart failure" has remained in medical parlance and it is all right if its significance is understood. It never means death of the heart, but that the heart is failing to do its work, and that brings us to the consideration of our subject—the causes which make the heart fail.

When I attended medical college twenty-five years ago the view then held was that heart failure resulted from the inability of the left ventricle to throw sufficient blood into the arteries, with the result that the ventricle dilated and sent a regurgitant stream back into auricle. The next step was the stasis and embarrassment of the pulmonary circulation and the right ventricle. The patient became cyanotic and dyspnoeic and the heart action became irregular. Finally the distress of the right heart became so great that tricuspid incompetence took place and the last stage of heart failure set in with the distention of the venous system. Arising out of this conception of heart failure from "backward pressure" is the idea that the prevention of heart failure in cases of valvular disease is due to the muscle of the heart hypertrophying and becoming stronger to meet the embarrassment caused by the valve defect, hence when valve defects are detected and there is no sign of heart failure, we are told that "compensation is good" when heart failure sets in, we are told that "we have decompensation," and if the patient recovers we are told "compensation is returned."

Unfortunately we are never given sufficient detail to convey a clear idea of what they have in view when they speak of compensation. We find people with perfectly normal and efficient hearts in whom a systolic murmur may be detected, spoken of as mitral regurgitation with good compensation because there are none of the so-called signs of backward pressure, and even in cases where exhaustion may be so extreme that the patient is about to die from heart failure, the heart is spoken of as having good compensation because no back pressure symptoms are present. These views were the outcome of the discovery of auscultation. Bruits were found associated with extreme heart failure. This association was at once assumed to be of vital significance and later, when a better knowledge of these murmurs permitted the recognition of their causation as being due to defects of certain orifices, their importance as the origin of heart failure was supposed to be

established and the back pressure theory was evolved to explain heart failure. There is no doubt that certain facts seem to conform to this view, but in the greater number of cases of grave heart failure so-called back pressure symptoms are entirely absent.

Following this period came a period when the valvular lesions were looked upon as less and less causative factors in the production of heart failure and we began to look for pathological changes in the heart muscle. We then found pathological changes in the heart muscle to be so varied that it was impossible to attribute the symptoms to any given pathological condition. This became all the more impressive when we found fatal heart failure associated with no perceptible lesions of the structures of the heart sufficient to account for the heart failure. There is no doubt that pathological processes play a considerable part in impairing the functional efficiency of the heart, but the fact that the heart may fail to do its work when there is abundance of seemingly healthy muscle present, forces us to the conclusion that the heart failure is in reality the outcome of the impairment of the function of the heart muscle, whether the heart muscle is apparently diseased or seemingly healthy. This view, that functional impairment is the essential cause of heart failure, gives us a line on which to study heart failure, which is the modified functions that occur during life.

I like to consider the heart as a modern pumping system consisting of a four-cylinder gas engine, a pump, and a caretaker. I think of the endocardium and the valves as being analogous to the pump, which in itself has no power to propel the blood, but is propelled by the motive action of the gas engine, to which I liken the heart muscle. I always imagine the water from the pump being raised to an overhead tank, the pipes representing the blood vessels. The gas engine consists of four cylinders with the cylinders operating in pairs. We have a fuel supply pipe to the engine called the gasoline feed pipe, to which I liken the coronary arteries, which supply the heart with fuel. The ignition system consists of a battery with a distributor, transmitting the current to the first two cylinders from which the current is redistributed to the other two cylinders. The caretaker represents the central nervous system that influences the heart rate, increasing or retarding it as the caretaker might accelerate or retard the speed of the engine. We were taught years ago that the main thing in keeping this system efficient was to keep all the valves in the pump working properly, and when they leaked that you must expect less water or increase the size of the whole pumping plant, and this is what occurs when the heart hypertrophies. We used to speak of hearts being compensated, and decompensated. When the heart hypertrophies or you enlarge your pumping plant you of course are compensating for your leak, but a heart does not decompensate. It may fail, and a compensated, a non-compensated, or a heart which has nothing to compensate, may fail.

That leads us up again to the vital phase of

* Read before the San Diego County Medical Society, January 9, 1923.

all heart disease, heart failure, or the failure of the heart to functionate properly. It is a rare thing for the pump to fail to do its work entirely as long as there is sufficient motive power to keep it going. The valves may leak, but as long as your motive power or your gas engine is working properly you will nearly always have sufficient reserve power for all ordinary needs. It is true that you may have trouble inside the pump, as an acute endocarditis, but it disturbs the efficiency of your system very little unless the inflammation extends to the motive power, the heart muscle. It may erode the valves and impair their efficiency, but if the motive power remains undamaged, which it seldom does, by the way, the pump will continue to function fairly well; but let the disease extend to the motive power, the heart muscle, and we are getting into the serious phase of all acute heart diseases, and you will find that a great number of cases of chronic valvular heart diseases which show signs of so-called "decompensation" are cases of recurrent endocardial infections which extend to and impair the efficiency of the heart muscle, and the heart failure and dilatation are results of this impairment of function rather than the results of strain, overwork, or back pressure. I think this is enough about the pump.

We have been taught for years that this was the only heart disease and heart diseases used to be spoken of as organic or functional, implying thereby valvular lesions for the one and any other disturbance as being functional.

Holding to our view that all heart failure is due to a functional impairment of the heart muscle, let us see what can happen to our motor or heart muscle, as the case may be. So long as it hits on all four cylinders regularly at a moderate rate of speed and has plenty of power, we may consider our motor as doing its work all right. Now let it commence to miss and we immediately think that something is wrong. In the case of your pumping plant you send for a mechanic and tell him your engine is missing. He listens to it and he may tell you that you are just nervous about it, to go on and it will be all right; or, if he is a more intelligent mechanic, he will first consider what may be the cause of the miss. I read a paper two years ago before this society upon pathological and physiological impulses arising in the heart. In that paper I called attention to physiological impulses arising in the heart, which disturbed the normal cardiac rhythm, but were not evidence of any heart disease nor did they materially impair its function. At the same time I called attention to the probability that all the pathological impulses arising in the heart were forerunners of the more serious disturbances of cardiac rhythm, and when we consider that over 60 per cent of all the cases of heart disease hospitalized in America and Europe are cases of auricular fibrillation, to say nothing of auricular flutter and heart block, we can readily see the importance of these pathological impulse formations. At that time I called attention to the

relation of extra systoles to tachycardias, and this in turn to flutter, and this in turn to fibrillation. At that time I had collected what evidence I could to show that these conditions were different stages of one and the same thing and that we have auricular extra systoles becoming auricular tachycardias, and auricular tachycardias becoming auricular flutters, and auricular flutters becoming auricular fibrillations. The same thing may occur in the ventricles, but it seldom gets beyond the stage of ventricular tachycardia before death occurs. However, there have been a few cases of ventricular flutter and ventricular fibrillation graphically recorded. Since I read that paper before this society there have been many graphic records made of cases passing from one of these conditions into the other, and I believe that, among the leading men in this line of work, it is generally accepted that they are all closely related, the first stage being a premature beat or so-called extra systole.

Now, if your mechanic endeavors to determine the cause of this miss in your motor, he may first consider the gasoline feed pipe, to which I liken the coronary arteries. The gasoline feed pipe may have its lumen reduced and you are not getting gas enough at all times and your engine prematurely fires through the carburetor. Now, this is what actually occurs in the heart if the lumen of the coronary arteries is reduced to a point where you are not getting fuel enough. If he finds that this is not the case he will next look at the fuel supply. There may be water in the gasoline or, in the case of a heart, there may be some toxin or poison in the blood causing the heart to beat prematurely. If these are all right he will next look at the ignition system. The distributor to the two head cylinders may be faulty and the impulse fail to arrive, or a defect may be in the wiring system and the impulse fail to be transmitted, as is the case in true heart block. In any case, he should find it and correct it. We are not always so successful with a heart. The cause can usually be elicited, but if the coronary arteries are clogged up, or their lumen reduced, you can't take them out and clean them. There seems to be a marked differences in the causation of these different irregularities occurring in the auricles from those occurring in the ventricles. It is rare to find ventricular premature beats occurring with auricular premature beats, and coronary disease usually produces disturbances of rhythm in the ventricle. Out of 103 cases of angina studied at the Peter Brent Brigham Hospital only one showed auricular fibrillation, and they concluded that patients with auricular fibrillation are not likely to have or to develop angina.

Now we often hear and are inclined to believe that the most serious heart diseases are some form of chronic valvular disease and that the heart finally decompensates and we finally get auricular fibrillation, as if auricular fibrillation was an end result in these valvular cases. As a matter of fact, this is not the case. It is true that a certain number of valvular cases later develop auricular fibrillation, but it is the exception rather

than the rule. The irregularity developing just before death is more often some form of cardiac irregularity other than fibrillation. But there is at present a tendency to call all forms of heart irregularity, fibrillation, if the patient is in a serious condition. In fibrillation we have two cylinders of our gas engine firing in the neighborhood of three hundred fifty times a minute and the other two cylinders getting these impulses redistributed to them as fast as they can come through. You can readily see that you haven't a very efficient engine. I live on a hill, and occasionally some one tries to come up this hill with his motor missing, sputtering, spitting. Finally the motorist shifts into low and then does not make it. When I see a case of auricular fibrillation, I think of a four-cylinder motor with two cylinders firing as rapidly as they can, with no regard to the other two cylinders, which are endeavoring to run the car, disturbed by the rapid, out-of-time firing of the first two cylinders.

How much water do you think your pumping plant would pump with your engine in this condition? Auricular flutter amounts to the same thing, as far as your heart muscle is concerned. And when you see a dilated heart with the auricles actually fibrillating, don't think that the fibrillation has followed the dilatation, but, rather, that the dilatation has followed the fibrillation, for if you didn't have a pretty good heart muscle at the onset of the fibrillation your patient wouldn't have lasted any time at all.

Now, what can happen to the caretaker? Remember, we likened the caretaker to the central nervous system which may be influenced by many bodily causes and which are extra cardiac. First, he may advance the timer and speed up the engine unnecessarily, sinistral tachycardia. This may be caused by emotion, hyperthyroidism, the toxins of chronic or acute diseases. We always have an accelerated pulse with infectious disease. He may short the battery for a moment and the engine will miss as in sinistral block, or he may retard the spark too far and the engine will run too slow—bradycardia, etc. But all these conditions are unimportant from a cardiac standpoint except that one must be able to differentiate a tachycardia or a bradycardia originating outside the heart from tachycardia or bradycardia originating inside of the heart, and I might also add here that I believe it is important in the study of pathological heart beats to know *whether they arise in the auricle or the ventricle*.

CONCLUSION

When you consider that more than half the cases hospitalized for heart disease are fibrillators, and then consider the number of cases of disturbance of the fuel supply due to coronary disease, and then consider the number of cases of impairment of function due to the different types of heart block, myocardial degenerations, and toxic poisoning, you must be convinced that chronic valvular diseases play a very unimportant part in the causation of heart failure, and that many patients die from disturbance of heart function who have a very good heart muscle.

SURGERY OF THE GALL-BLADDER*

By STERLING BUNNELL, M.D., San Francisco

PART II.

(Note—This article deals with the symptomatology, pathology and surgery of the gall-bladder. The physiology and etiology appeared in the preceding number of the Journal.)

SYMPTOMS

Cholecystitis generally commences in the first third of life, and for ten or fifteen years runs a rather mild course. This could be called the first stage. In the second stage, usually between the ages of 35 and 55 years, the symptoms are more pronounced and result from the movement of stones or from recurrent acute and chronic infections. In the third stage, usually between the ages of 45 and 75 years, we have empyema, gangrene, and perforation of the gall-bladder, obstruction of the common duct and pancreatitis. This is a stage of high mortality—over 20 per cent—and it is no credit to the profession that our patients are allowed to progress to this degree.

The time for diagnosing and operating on cholecystitis is in the first stage, and here we must depend upon reflex symptoms, toxic symptoms, and deductive reasoning. We find the history of an infection and its relationship to the beginning of indigestion and toxemia. There are recurring bilious attacks, consisting of distress after eating and upward fullness, belching, sour, bitter eructations, rarely vomiting, and a foul taste in the mouth, especially on rising. There is a qualitative indigestion, and the attacks are sudden, short, and irregular in their occurrence. They are eased by belching, regurgitating, vomiting, alkalies, dieting, fasting, and by calomel. The toxic symptoms may consist of chilliness, general ill feelings and vague pains, myalgia, arthritis, endocarditis, and myocarditis, which clear up after cholecystectomy. The mortality of operations at this stage should be less than 1 per cent. The appearance of the gall-bladder is usually not far from the normal.

The symptoms in the second stage, if due to the movement of stones, consist of typical severe gall-bladder colic from mechanical obstruction. If, however, infection of the gall-bladder is the more prominent factor, there is daily complaint, flatulency, distress, epigastric pain, sour, bitter regurgitation and eructations, and this is more or less associated with the taking of food. In this stage there are usually no chills, fever, or jaundice.

Let us consider certain aspects of the symptoms: Reflex indigestion, whether due to cholecystitis or appendicitis, is shown by stomach trouble, which is essentially irregular in times and changeable in character. It differs day by day, because the stomach behaves normally unless reflexly irritated. The x-ray shows that this indigestion is due to pylorospasm. In cholecystitis, on filling the stomach, there is first a tonic contraction of the pyloric end, soon deep peristaltic waves traverse the stomach in an effort to force its contents of food and gas through the pylorus. If pylorospasm will not allow this, the contents are forced backward and

* Read before the San Francisco County Medical Society, March 20, 1923.

the cardiac sphincter gives way, allowing regurgitation into the œsophagus. Clinically the patient soon after eating feels full, too full for the amount eaten, and he has upward distress. Then, as the regurgitation takes place in the œsophagus, there is belching or pyrosis, and, if the degree of muscle tone is greater, there is nausea and even vomiting.

The symptoms of gall-stones differ from those of cholecystitis, in that the attacks are more sudden, the pain is more severe, yielding only to morphine, there is no rise in temperature, attacks end abruptly, and indigestion does not persist between attacks. There is often no local tenderness. The wall of the gall-bladder is often atrophic without great sepsis and with but little remaining musculature. The symptoms of cholecystitis differ, in that the factor of sepsis is greater. The wall of the gall-bladder is infiltrated and inflammatory, and as the gall-bladder contracts pain is produced. The infection localizes the tenderness in the gall-bladder and surrounding peritoneum. Reflex stomach symptoms are present. The upward bursting sensation is often not accompanied by actual gas distention. The dyspepsia is qualitative, in that the type of food rather than the quantity causes the distress; greasy fried foods, raw apples, acid fruits, pastries, slow-digesting foods are ones most complained of. Toxic symptoms and sometimes a degree of fever are present. Cholecystitis also produces attacks due to recurrent acute infection, but these attacks are less violent than from stones and often do not require morphine. They come less suddenly and last several days. Gall-stone colic often lasts but a half-hour. It is evident, of course, that many cases have both sets of symptoms.

The pain from gall-bladder is felt in the epigastrium until the gall-bladder wall becomes infected, in which case it is localized at the gall-bladder and often radiates directly posterior to the back and up to the right shoulder-blade. If the gall-bladder is low, a rigidity high in the loin may distinguish it from appendicitis. In pure cholecystitis the fever is seldom more than a degree or a degree and a half, unless empyema of the gall-bladder is present, in which case it may reach 101 or 102 degrees. If there be obstruction of the cystic duct, absorption will take place from the gall-bladder under pressure, and the fever rises high. If there is obstruction in the common duct, infection under pressure takes place, and because of the great absorption surface within the liver, a high steeple temperature curve, with chills, results.

Jaundice is not a symptom of cholecystitis unless the infection be severe enough to be accompanied by some hepatitis and pancreatitis. These cases constitute but 5 to 8 per cent of all cases of jaundice. Fifty per cent of all cases are caused by obstruction of the common duct; the remaining cases of jaundice being principally due to the catarrhal jaundice of the young, 20 per cent; cancer of the liver, gall-bladder, ducts, or pancreas, 15 per cent, and scirrhus of the liver, 8 per cent.

There are certain symptoms quite characteristic of cholecystitis, such as the suddenness and severity of the attack of colic, the attack coming on at irreg-

ular times, often brought on by exercise, diet, alcohol, or jolting, intervals of complete freedom between attacks, the history of early irregular attacks of biliousness, later changing to more typical gall-bladder attacks, and finally settling down to daily complaints of indigestion. Other characteristic symptoms are the diaphragmatic grunt in an effort to splint the diaphragm, bursting sensation, chilliness, slight fever, nausea accompanying the attacks, slight degree of constipation, the fairly common association of colitis, the vomiting of green bile with bitter taste. Of physical signs the most important are the slight relative local rigidity over the gall-bladder and near-by part of the right rectus muscle and the tenderness of the gall-bladder on inspiration, compared with the lesser tenderness found more to the right and that found more medially.

The x-ray furnishes a valuable check on the clinical diagnosis and more by other signs than by the demonstration of stones. In the right oblique prone position a semi-lunar dent of the duodenal cap, sharper at its edge than at its convexity, indicates cholecystitis. An initial pylorospasm followed by long, slow, deep waves and some œsophageal regurgitation speaks for gall-bladder. More rapid superficial waves without œsophageal regurgitation point more to appendicitis. The gall-bladder itself often shows a shadow, due to the thickened bile and gall-bladder wall. These signs have been largely developed by the work of Dr. Arial George and Dr. M. P. Burnham.

SURGICAL PATHOLOGY

As the abdomen is open, it is well first to observe carefully to discover the minor signs of biliary infection before these signs are obliterated by handling the abdominal contents. We may thus note the direction of pull of the surrounding organs, due to adhesions, the slight increase of congestion as we near the gall-bladder, the localized edema, slight fluid or new-formed delicate adhesions, the degree of tone of the cecum and the peristalsis of the stomach. A localized hepatitis may show as merely a local flushing of the liver or a fine white ribbing next to the gall-bladder and an outlining of liver lobules, due to increase in connective tissue. Often the liver edge is thin and yellowish near the gall-bladder from past inflammation, and if much hepatitis has been present Glisson's capsule is white, opaque, and puckered in a zone two inches in radius from the gall-bladder. In a more acute attack the liver is swollen, soft, and purple. Adhesions when present are usually greater as we approach the neck of the gall-bladder. Others may be felt around under the heel of the liver, where seepage has reached. Realizing that only 6 per cent of fetuses are free from abdominal adhesions, we must distinguish between adhesions which are congenital and those which are acquired. The former have organized blood vessels running across them, and they conform to certain known types of bands or veils running from the gall-bladder to the transverse colon or duodenum. Adhesions between the gall-bladder and the omentum are acquired.

The gall-bladder itself may show but very little gross change from the normal and still be infected. There may be an increase in the tenseness, due to the action of the cystic kink. The gall-bladder may be elongated beyond the liver from repeated overdistention. The color may be slightly milky or grayish and more opaque than normal, and the thickness slightly greater, and the wall slightly more edematous. A purplish wall with vessels showing on the surface indicates infection; enlarged lymphatic vessels can sometimes be seen. A strawberry gall-bladder loaded with lipoids shows a slight dotting on its outer surface.

Enlargement of the glands which drain from the gall-bladder is quite indicative of cholecystitis, and especially when we find no cause in the other organs for this enlargement. A small gland can be felt just behind and halfway down the cystic duct. Another one is often felt at the junction of the common and cystic ducts. A larger one sometimes a centimeter in diameter can be felt just to the left of and anterior to the common duct as it meets the pancreas. As we feel down the cystic duct and along the common duct induration of the tissues may be detected. The head of the pancreas should always be felt for increased hardness or signs of more acute pancreatitis, in which case we can often feel through the duodenal wall the ampulla of Vater standing up as a tense cone. It is well to make a special search for stones in the hepatic ducts and in the duodenal portion of the common duct.

If the clinical history, together with the x-ray findings, points definitely to cholecystitis as the diagnosis, even in a case where the gall-bladder appears to be normal, cholecystectomy should be performed. In my personal experience by following this rule the clinical results justified the procedure. In such cases microscopic examination of the gall-bladder will demonstrate infection.

If the mucous membrane of a normal gall-bladder is floated in water and examined with a lens the villæ will show as most delicate, long, waving, convoluted folds. If the gall-bladder is infected these delicate structures will be found to be congested and edematous, with broad bases and bulbous borders. Many of the folds will be seen to be dotted with yellowish opaque patches. Often the villus ridges will be outlined with this opaque substance, or the substance may be quite widespread throughout the whole mucous membrane. This substance is lipid; it is a fatty acid ester of cholesterol and is deposited in tiny particles in the distal part of the surface cells of the mucous membrane. If more of this lipid is present, it is seen to be in the fibroblasts and in the endothelial cells of the vessels deeper in the gall-bladder wall. In some cases it is found to be in all of the layers of the gall-bladder except in the serous coat. When these lipid deposits are in surface patches the name strawberry gall-bladder is applied. In 10 per cent of the gall-bladders removed it can be seen with the naked eye, and in 50 per cent it can be demonstrated microscopically. Under the polarizing microscope the deposits are conspicuous, as they appear opaque and shining like silver.

Lipoid deposits are found mostly in the earlier mild infections of gall-bladders. Here, instead of the cholesterol being completely absorbed, it is deposited as lipoids in the gall-bladder wall. It is not found in the more severe infections of gall-bladders, as these gall-bladders no longer absorb cholesterol. Sometimes villæ can be seen loaded with lipoids and hanging by a thin pedicle. These break off into the lumen of the gall-bladder, and there is evidence to show that they form the nuclei of stones. When we consider that the factors causing the formation of gall-stones are stasis of bile, bacterial action on bile and concentration of cholesterol by non-absorption, it is apparent that in cholecystitis all these factors are present.

Other microscopical signs of inflammation can be seen in the wall of the gall-bladder, such as round-cell infiltration, lymphocytosis, leukocytosis, and fibrosis in all of the coats, though mostly below the mucosa.

Occasionally (4 per cent of gall-bladders removed) a few small papillæ can be found. These are but six times the size of the normal folds of the gall-bladder and have been shown to indicate cholecystitis. If the bile from an infected gall-bladder be viewed through a clear glass vessel, sand, turbidity, or flocculent precipitate may be seen. For several years I have invariably examined gall-bladders for their mucous content. The test used is a simple one; the bile is put in a bowl on the floor, a Mayo hemostat is closed in it and lifted quickly straight up. The height that the mucous will lift before the string is broken indicates roughly the mucous content. The normal was found to be from two and a half to three feet. Catarrhal gall-bladders, and especially of the strawberry type, will show a mucous lift of eight feet. Old, chronically infected gall-bladders, with stones, contain such a small amount of mucous that it may lift only half an inch. Cases of hydrops have ceased to secrete mucous and lift but half an inch. In empyema and gangrene of the gall-bladder there is almost no mucous to be found.

SURGERY

An incision made quite high and medially, or even a high median incision, will give the best delivery of the gall-bladder, as the nearer the incision corresponds to the attachments of the liver, the more readily can the liver be swung up through it. A history conclusive of cholecystitis is a better guide in determining upon the removal of a gall-bladder than is the gross appearance of the organ, and in none but the most acute cases should the gall-bladder be merely drained. From cholecystectomy the operative mortality is one-third less than that from cholecystostomy, the drainage is less, fewer chronic fistulas result, the average post-operative time in a hospital is cut down one-third, and the percentage of permanent cures is over one-third greater.

In a series of cases reoperated on for gall-bladder trouble 65 per cent were due to failure to remove the gall-bladder in the first operation. After cholecystectomy stones rarely re-form; adhesions are less; the focus of infection has been removed.

If symptoms do persist they are usually due to hepatitis or pancreatitis that has not yet resolved, or to disturbing adhesions.

As adhesions are a frequent cause of failure to cure, the region should be handled as little as possible and as nearly as possible atraumatically. A stitch or two of fine catgut to join the lesser omentum to the mesocolon, or to fasten the great omentum into the hepatoduodenal angle, will insure against the attachment of adhesions to the more sensitive pylorus or duodenum.

It is my conviction, after trying to dispense with drains after cholecystectomy, that drainage is advisable, not so much from leakage from the cystic duct as from the weeping of bile from the denuded surface of the liver. If the drain is placed next the stump of the cystic duct we will prevent adhesions from covering the duct and will invite re-opening of the duct with consequent leakage of bile. The method I most favor is to catch a long suture of 0 catgut to the mesocolon at least an inch and a half to the right of the cystic duct. Over these two strands of catgut a narrow perforated piece of catheter is threaded down to the mesocolon. The catheter is withdrawn an inch a day, and is out in four days. The strands of catgut remain a few days longer, so if any fluid then forms it will be guided to the surface. Removal of the appendix should be done routinely, as these two infections are commonly coincident.

Anomalous variations in the common and hepatic ducts occur frequently enough to demand careful identification by dissection before the cystic duct is cut across. If the ducts should be injured the method of direct catgut suture seems the most desirable. Twice I have had occasion to do this where the hepatic ducts were severed close to the liver. End-to-end joining, as in arterial suture, though difficult, was entirely successful. Rubber tubes left in the ducts sometimes do not pass, and ducts reconstructed over tubes too often later become strictured. If there be a defect in the ducts too great for approximation, the common duct can be implanted obliquely into the duodenum, or a hepatoduodenostomy can be performed where the hepatic ducts emerge from the liver.

If carcinoma is blocking the common duct a palliative cholecystoenterostomy is advisable to prolong life and make it more bearable. It is well to use the jejunum retrocolicly and either use the suture method or imbed the denuded end of the gall-bladder obliquely through the wall of the intestine, as in implanting a ureter.

A chronic biliary fistula is usually due to stone or the persistence of cholecystitis and sometimes to cut or strictured common duct. In the case of a biliary fistula, where the patient is losing ground with cachexia cholepriva, the emergency may be tided over by performing under local anesthesia a Witzel gastrostomy and leading the bile into the stomach. The stomach stands bile well.

In acute cases of cholecystitis, such as empyema or gangrene, the mortality rises to 30 per cent. Here, if technically easy, a clean cholecystectomy often gives a remarkably easy convalescence. If the case is too extreme some life-saving measure must

be used; a short incision under local anesthesia or gas and oxygen, a rubber tube placed in the gall-bladder, a strip of iodoform gauze packed around it, all stitches omitted and transfusion given to combat the shock. Some advise shelling out the gall-bladder from its peritoneal coat, but if ulcers or gangrene be present this is not without danger of rupture. Usually a stone blocking the cystic duct is the cause in these extreme cases, in which the gall-bladder is distended.

In cases of jaundice where the clotting time is over ten minutes transfusion is usually of material advantage in lessening post-operative hemorrhage. Where the obstruction is complete and has existed about four months the contents of the ducts may be white. This is not white bile, as the liver has ceased to secrete into the ducts. It is the fluid that will distend an isolated segment of duct, or a hydrops of the gall-bladder. When, in such a case, the ducts are drained, bile usually makes its appearance in twenty-four hours. If the liver is too badly damaged the bile will take longer to appear, and in such cases the outlook is grave. A case has been reported where the liver had ceased altogether to secrete bile, so that even jaundice was not present.

When obstruction of the common duct, usually from stone, has existed for some time, a biliary scirrhus with continuous jaundice is apt to develop. Here again drainage does not always cure, as the hepatic changes have become too severe.

A third serious liver complication of biliary infections is acute hepatitis. The liver is rounded and enlarged with the extreme purplish congestion of infection. It feels even indurated in places, suggesting abscess formation. Such cases usually terminate fatally.

In conclusion I would urge the recognition of cholecystitis in its early stage and its cure by cholecystectomy at a time when the mortality is low. The patient may thus be saved a life of indigestion and the hazard of the preventable later stage of severe complications.

516 Sutter Street.

The Common Sources of Error in Lung Examinations—E. A. Duncan, El Paso, Texas (Journal A. M. A., April 28, 1923), asserts that the considerable number of erroneous diagnoses of pulmonary tuberculosis are almost always based on or supported by descriptions of nonexistent or misinterpreted physical signs. Any single sign of increased pulmonary density, especially at the apexes, unaccompanied by other evidence, must be regarded as insufficient and conclusions therefrom withheld. This applies equally to alterations in fremitus, percussion changes and abnormal breath sounds. The misleading differences in the physical signs of the two sides must be kept in mind. Vigilance on the part of the examiner to recognize factitious accentuations of breath sounds, extrapulmonary noises of cartilaginous origin and marginal sounds is essential to correct diagnosis. The elicitation of provoked rales requires a considerable reduction of pulmonary volume by expiration followed by cough. Basal bronchitis without upper lobe involvement must be proved tuberculous by the laboratory before such diagnosis can be made.

PRECANCEROUS SKIN LESIONS *

By MOSES SCHOLTZ, M. D., Los Angeles

Among clinical varieties of cancer, skin cancer is fully demonstrating the destructive power of the scourge. It is safe to say that cancer statistics fall far below the actual number of cases. United States Census figures of cancer mortality show 72,550 deaths for 1920. The cancer of the gastrointestinal tract is leading; the second is cancer of the female generative organs and of the breast; cancer of the skin is the last. Adding to it cancer of the lips, tongue, and buccal cavity, which properly falls in the field of dermatology, skin cancers make up about 7 per cent of the total cancer mortality. According to the United States Census figures, this would make for 1920 not less than 5000 deaths from skin cancer in this country.

Skin Cancer vs. Systemic—Skin cancer deserves earnest study and attention at the hands of physicians for two special reasons. To appreciate these reasons one has only to consider the peculiar topographic location of the skin in the human economy and resulting therefrom peculiarities in skin diagnosis and pathology.

Skin is the only surface organ of the body, subject to a direct and complete inspection. Skin offers a unique opportunity of a direct objective diagnosis unequaled by any other organ. It offers a unique opportunity of the earliest possible diagnosis of cancer, in the so-called precancerous stage, before the actual malignancy has set in. How simple is clinical diagnosis of skin cancer, even in its earliest incipency, in comparison with cancer of the visceral organs. A positive or at least suggestive diagnosis can be obtained through mere inspection, palpation, and careful clinical study of the lesion and of the adjacent tissues. Yet how many cases of skin cancer come for treatment in a very advanced stage! Not all of these cases are due to ignorance or neglect of the patients themselves or of their quasi-medical advisers. A certain amount of responsibility must be laid at the door of the medical profession, both because of insufficient familiarity with clinical features of early skin malignancy, and because of a certain lack of energy in looking for and detecting these lesions. A thorough and detailed familiarity with clinical characteristics of precancerous lesions is imperative in the prevention of cancer. As precancerous skin lesions ordinarily produce no subjective distress or annoyance, physicians should be all the more careful in scrutinizing skin lesions.

Therapeutic Aspects of Skin Cancer—The same anatomic peculiarities of the skin which make for unique diagnostic opportunities offer also unique therapeutic advantages in cancer problem. Skin cancer is, unquestionably, the least dangerous clinical form of cancer and gives the best prognosis for these very reasons. It can be diagnosed earlier than any visceral variety, and it can be extirpated and destroyed without injury and destruction of the rest of the body. Both surgery and radiotherapy record most of their successes in the field of skin cancer.

Precancerous Lesions—The tendency of a lesion to become precancerous is brought about by the general determinant factors of cancerous degeneration. Among various hypotheses and theories of cancer causation three factors stand out as universally accepted: (1) old age of the patient; (2) damaged or pathologically changed structure of the tissue; (3) chronic mechanical, chemical or biochemical irritations. The combined presence of these three factors is usually sufficient to stimulate a precancerous lesion into actual malignancy. In spite of the occasional occurrence of epithelioma in young individuals, the old adage that cancer is a disease of old age holds good. The likelihood of a lesion to turn precancerous increases with the age of the individual. Any tissue that has undergone morbid changes becomes potentially precancerous. Scars, keratoses, new growths, ulcers, various dermatoses, X-ray atrophic skin changes, etc., belong to this group.

The third determinant factor of cancerous degeneration—chronic irritation—is one of the best established observations. It gives us a practical and definite guidance, both in diagnosis and treatment, as to gauging the likelihood of a lesion to turn cancerous. The localization of the lesion is a matter of great importance. A wart or a nevus located so as likely to be mechanically irritated (for instance, on the face by shaving or picking, on the neck by a collar, on the scalp by a hat or comb, on the chest by clothing or stays of a corset) such lesions should be considered potentially precancerous and should be removed or destroyed. Seborrheic keratosis located on the lip and subject to the irritation by a cigar or a pipe has infinitely more chances to turn cancerous than a similar lesion on the face. The same type of lesion located out of a sphere of local irritation can be left alone, as lacking the potentiality of malignancy.

Seborrhea and Actinic Sun-rays vs. Skin Cancer—Among contributing factors of less importance should be mentioned seborrhea and actinic sun-rays.

The discussion of the general subversive nutritive effect of seborrhea on the skin would exceed the scope of this paper. I shall emphasize only the unusual frequency of association of senile keratoses with seborrheic skin. The commonly used substitute name for senile keratoses—seborrheic warts emphasize this association. As to the influence of actinic sun-rays on development of skin cancer, this has been born out strongly by clinical observations. Dubreuil in France, and Brothers and Sutton in this country have presented figures showing that more than half of the people developing skin cancer on the face and hands are farmers, sailors, and other individuals spending a large part of their time outdoors. Hence, the term "farmer's" and "sailor's" skin is used to designate a certain type of the skin predisposed to precancerous keratoses. The practical inference is that people with florid seborrheic complexion and farmer's skin should be watched for a possible development of precancerous keratoses.

Senile Keratoses—The largest and the most im-

* Read before the Medical Staff meeting of Los Angeles County Hospital, June 6, 1922.

portant group among precancerous lesions is senile keratoses. Senile keratoses are unquestionably the most frequent source of malignant degeneration and are responsible for more epitheliomata than any other type of precancerous skin lesions. A very large percentage of middle-aged and old people carry single or multiple lesions, at times by dozens, of senile keratoses on the face and hands.

The clinical type of these keratoses is familiar to all, only their strong potentiality of malignancy is not sufficiently impressed on the profession. These keratoses appear as pigmented grayish white or brownish spots or elevations, soft or harsh, smooth or scaly. Richard Sutton of Kansas City has offered on clinical and pathologic grounds a very sensible classification, dividing them into three groups according to the source of their origin. First, seborrheic keratoses developing from seborrheic patches. Second, nevoid keratoses springing from nevi. Third, strictly keratotic type starting from the horny layer of epidermis.

These keratoses should not be considered harmless. It is true that only a small percentage of them turn malignant, but on the other hand most of epitheliomata were at their incipency just this kind of trivial looking brown spots. The most reliable clinical indication that malignancy is about to or has already set in is when lesions become rough and scaly with a persistent recurrence of a tightly adherent dry scab. The tendency to bleed and a hemorrhagic crust is a rather late symptom and should not be waited for diagnosis of early malignancy.

Treatment of Senile Keratoses—The destruction of senile keratoses can be effected in many ways by surgical excision, chemical cauterization or electro-cautery, fulguration with high frequency spark and by radiotherapy. The selection of the method depends on the character and localization of the keratosis, and should be strictly individualized.

Surgery is appropriated in sharply defined keratoses of seborrheic or nevoid type. Speaking generally, surgery is less applicable in senile keratoses than in any other type of precancerous lesions. Soft nevoid or seborrheic keratoses can be very neatly and thoroughly destroyed by chemical cauterization. The important principle to remember here is that cauterization must be thorough and complete or not at all. For this reason mild cauterizants, such as silver nitrate, copper sulfate, etc., are distinctly contraindicated. I find 100 per cent trichloroacetic acid very effective in this soft type, seborrheic and nevoid senile keratoses, but not in horny variety, which acid cannot penetrate. The horny variety can be destroyed by electrocautery or by high frequency fulguration. X-ray, of course, is effective and can clear up any and all types of senile keratoses. The cosmetic results are better than any other method, with the exception of radium. In spite of it, X-ray should be applied only in properly selected cases, particularly in multiple and diffuse keratoses. Radium shares all the advantages and limitations of X-ray. Like X-ray it should be applied only in selected cases, since the majority of senile keratoses can be controlled by simpler and cheaper means.

Leukoplakias—While senile keratoses form the largest and the most important group, there is a number of other forms of precancerous lesions of clinical interest. Among these should be mentioned leukoplakias or so-called smoker's patches. Leukoplakia patches occur in the mouth, commonly on the tongue or cheeks. Some writers are inclined to regard them as syphilitic or parasymphilitic. In my opinion, neither clinically nor pathologically do leukoplakia patches present any features of luetic nature. Besides, specific treatment has no effect whatsoever. Smoking seems to exert a striking stimulating effect on leukoplakia patches. For once the lay name "smoker's patches" is perfectly rational and expressive of etiology. Leukoplakia patches yield the best to radium or electrocautery.

Arsenical Keratoses—Another precancerous skin lesion of clinical interest, though not a common one, is arsenical keratoses. It is not known generally that arsenic, after a prolonged administration, produces multiple keratoses, particularly on the palms and soles. These keratoses have a strong tendency to malignancy and develop mostly squamous-celled epitheliomata. The practical inference is that patients who are taking arsenic for long periods of time because of some chronic and recurrent conditions should not be allowed to refill the prescription at their discretion, and must be watched for a possible development of arsenical keratoses.

Scars as Precancerous Lesions—Scars should not be overlooked as potential precancerous lesions. Scars after burns are particularly notorious in this respect. In a series of 252 cases of squamous-celled epithelioma, Brothers of Mayo's clinic has found that one-fifth of them were in the scars from burns, and to a smaller extent in scars from other causes, such as energetic cauterization or previous lesions, such as ulcers, lupus vulgaris, syphilides, etc. As a practical inference it means that scars should be watched for a possibility of malignancy. It means also that all unnecessary and careless cauterization producing scars should be avoided. As an illustration of such ill-advised cauterization, I would cite scars occasionally seen after cauterization by carbolic acid of superficial skin infections, and cauterization by nitric acid of warts and other benign growths. As the least scarring and very effective cauterizing agent in soft lesions, I would mention again 100 per cent trichloroacetic acid. In horny lesions fulguration with high frequency spark with or without curettage is excellent.

Nevi as Precancerous Lesions—Nevi occasionally undergo epitheliomatous degeneration. In this regard pigmented melanotic nevi have particularly a bad name, as producers of extremely malignant melanocarcinomata. In my opinion, the danger of cancer originating from pigmented nevi is greatly overrated. Among many hundreds of epitheliomata seen, I recall only two melanocarcinomata. The number of melanocarcinomata starting from pigmented nevi reported in the literature is extremely small. It is true that patients should not irritate a pigmented nevus mechanically or by

medication, but there is no valid reason why a physician should be afraid to destroy a pigmented nevus for cosmetic reasons or as a preventive measure, provided cauterization is thorough. Trichloroacetic acid and fulguration are very effective in this type. Surgical excision is less desirable.

Radiodermatitis as Precancerous Lesions—Last but not least among precancerous lesions is chronic degenerative skin changes due to X-ray and radium burns. The first step in this direction is development of small discrete horny peg-like keratoses. The potentiality of X-ray burn as cancer producer is well understood by the profession at large. The dangers of radium are known much less. At present, when radium is so popular, there are more opportunities for mischief from radium than from X-ray. Neither radium nor X-ray should be used in lesions which can be cleared up by other simpler means.

CONCLUSION

In conclusion I wish to emphasize once more that precancerous skin lesions constitute a large group, that clinically they are readily identified and easily yield to a therapeutic control, and that by early recognition and rational therapeutics of precancerous skin lesions we can reduce skin cancers to a very desirable minimum.

Brockman Building.

THE GROWING EMPHASIS UPON REST IN THE TREATMENT OF PULMO- NARY TUBERCULOSIS *

By PHILIP KING BROWN, M. D., San Francisco

The essential treatment of pulmonary tuberculosis is *rest*; the secondary considerations are good air, good food, and peace of mind. There is no drug or vaccine therapy that contributes enough to deserve more than passing consideration, chiefly to define the extreme limitations which justify in any way their use, to relegate them to the historical scrap-basket, or to condemn them altogether.

Of drugs, codein for excessive and irritating coughs, especially in the presence of hemorrhage and severe pleural pain, has a place, but it is surprising that in a forty-bed sanatorium, full all the time, the amount of codein used in ten years has been almost insignificant. No drug influences either the formation of tubercle or stimulates that subtle and much misunderstood term we use so freely—resistance. Much interest has centered about the possibilities of chaulmoogra oil derivatives both because of their extraordinary influence on leprosy and their inhibiting influence in dilution of 1 in 1,000,000 on the growth of tubercle bacilli and their destructive effects on these organisms in dilutions of 1 in 100,000. Preparations of this substance, notably the ethyl esters have been used in 5 cc. doses intramuscularly as frequently as twice a week with only mildly toxic effects on patients, but with no appreciable effect on the tuberculous processes in the lung. Such doses com-

pared to the volume of the adult patient weighing 150 pounds, or 70 kilos, would represent a dilution of 1 in 14,000, so it is obvious that either this particular preparation is rendered chemically inert in the body, or has no power to penetrate the automatically isolated tuberculous process. This does not mean that other preparations of chaulmoogra oil may not be found which will possess the power which the ethyl esters apparently do not possess, and in the hands of Dr. E. L. Walker of the Hooper Foundation the Research Committee of the National Tuberculosis Association, assisted by grants from the California Tuberculosis Association, the San Francisco Tuberculosis Association, and several private individuals, has placed the task of working out this problem to some conclusion, since in their opinion it offers the best lead toward a possible therapeutic agent for tuberculosis. In the meantime there is growing evidence that tubercular enteritis is remarkably and promptly influenced, if not entirely cured by the use of salol-coated capsules of the fatty acids of chaulmoogra oil; that open tuberculosis of the larynx is materially influenced by local applications of the pure ethyl esters and tuberculous empyema rendered free from tubercle bacilli by the intrapleural injection of a sodium salt in weak dilution. All this suggests also that we have a remedy in sight for surgical tuberculosis, which promises much if the remedy can be brought into immediate contact with the lesion.

Claims for the recently exploited preparations of copper and arsenic are without foundation. Such preparations should never be used unless reported on by authorities after careful trial in sanatoria.

Vaccine therapy in tuberculosis has been a great disappointment and has simmered down to a very limited helpfulness from certain tuberculin preparations in a few cases. When progress toward arrest has ceased and for a period the patient stands still and none of the usual variables suggest the need of adjustment, tuberculin may be tried with some chance of telling whether it does good or not. Used on febrile or ambulatory cases over which the administrator has no control, its use is little more than a crime, and there is no way of determining any possible benefit attributable solely to the remedy. The recent advocacy of partigens—a coined word for partial antigens—supposedly selected parts of tuberculin, needs only to be mentioned to be condemned. German literature almost unanimously affirms their uselessness. Vaughan, in a recent editorial in the *Journal of Laboratory and Clinical Medicine*, says: "How these partigens are prepared seems to be known only to the discoverer. Minute directions are given for their administration, and we are told these partigens can be purchased from Kalle & Co., Briebrich-on-Rhine. After reading the book (by Dr. Henry Much, recently translated into English) we must admit it leaves but one impression upon us, and that is the purpose of its writing is to sell the partigen. There are no details concerning the preparation of this curative body, no record of animal experimentation, no experimental protocols,

* Presented at the Saint Francis Hospital Clinical Society.

and apparently we are asked to accept the statements of the distinguished author without asking any questions. . . . We are asking ourselves, whatever we may think or surmise concerning the purpose in writing the book, whether any responsibility lies with the translator and the publisher."

Considerable newspaper notoriety has been given recently to the claims of Mr. Henry Spahlinger of Geneva. So skillfully has the advertising and propaganda gone on that, all over the world, reports have been made of his wonderful "cures." Two communications on the subject from people who have personally investigated Spahlinger's treatment add an interesting side-light. Dr. Gerald Webb, recently president of the National Tuberculosis Association, made a thorough investigation of his work last November. He thinks him honest and sincere, but he is not medically trained and must depend upon others for clinical judgment. Dr. Webb's comment was that the people on whom he depended most seemed to be those who enthused about the results, but his impression was that they were carried away by so-called cures such as we see daily without Spahlinger's remedies. Dr. Webb was not convinced.

Dr. Humbert, chief of the Division of Popular Health Instruction in charge of the Tuberculosis Division of the League of Red Cross Societies, writes that there is very little available literature on the subject. He calls attention to the fact that scientific and technical details have not been given by Spahlinger, so that no one really knows what the treatment is; that Spahlinger refuses to give absolutely clear and precise information; so, therefore, he also suspends all judgment.

The writer has no doubt that the Spahlinger treatment will be found, like many others, to be the result of an enthusiastic individual's overestimation of a remedy that has not contributed specifically to the cure of tuberculosis.

We return, then, to the agencies which contribute to the rest of the diseased lung. For many years the technique of rest has been studied, and there are notable contributions to it that have stood the test of time and have come into general use. A few of them are in the developmental stage and deserve study and trial in well selected cases. The five methods in addition to rest in bed which have been proposed for producing relative immobilization of all or part of one side of the lungs are:

1. (a) Postural rest, lying twenty-three and one-half hours a day on the affected side in one-sided cases. Advocated by Webb.

- (b) Sand bags on the affected part (Sewell), giving to less degree the same result.

2. Section of the phrenic nerve in the neck on the affected side causing paralysis of half of the diaphragm and partial collapse of the lower lobe.

3. Local replacement by some foreign body of the area occupied by the affected part of the lung if in the apex, after extrapleural rib resection (Tuffier).

4. Collapse of the lung by nitrogen gas or air introduced into the pleural cavity under pressure (Forlanini, 1882, and Murphy, 1898).

5. Resection of parts of all the ribs on one side causing thereby a narrowing of the chest on the affected side commensurate with the collapse needed. (Schader, Brauer, Friedrichs, Wilms, Sauerbruch, etc.)

The first method is so simple that it demands trial in every unilateral process. So great has been Webb's success with the method that it has largely replaced artificial pneumothorax in his hands. In his exhaustive article on the subject (for National Tuberculosis Society) he presents X-ray plates showing how limited is the motion on the side on which the patient lies, and the exaggerated excursion of the upper side. The object of the fifteen-minute periods on the well side is to facilitate cavity drainage.

Of resection of the phrenic nerve it has been said by Morriston Davies that it is especially applicable when there are secondary changes either mechanical or from infection to considerable extent in the lower lobe; where it is advisable to diminish the movement of the lower lobe when it is the seat of primary disease; to prevent aspiration of tuberculous or pyogenic material from the upper lobe, so commonly the cause of extension of processes from upper lobe cavity; and as a preventive measure against the development of bronchiectasis in chronic interstitial pneumonia.

Resection of the phrenic nerve has not commended itself for consideration by surgeons who have had much experience with physiological functions. There is accumulating evidence that in any case of fracture of the cervical vertebrae with complete destruction of the cord, where the breathing is all diaphragmatic, the vital capacity is diminished to about 10 per cent of the normal. This would make 5 per cent for the affected side. To subject a person to a serious operation, particularly a tuberculous individual, only to relieve him of 5 per cent of the work on the side operated on, would hardly commend itself to a thoughtful surgeon as a desirable procedure.

Tuffier's procedure of partial thoracoplasty and introduction of foreign matter to aid compression, practiced also by Baer, has been used by numerous surgeons as an adjunct to extensive thoracoplasty. Archibald of Montreal uses it in anterior apicoplasty, leaving the first rib intact, and feels that the shoulder is better supported in this way. Our own experience has been entirely with the efforts to bring about complete compression of the apex by removal of all or part of the first rib and shortening the clavicle.

There remains to be considered the two means of complete collapse of the affected side, artificial pneumothorax and thoracoplasty.

That pneumothorax has been a great contribution to the treatment of unilateral pulmonary tuberculosis, no one who has used it will deny. Like all therapeutic methods, it had to go through a long experimental period, and undoubtedly its

use has been abused badly. Too early cases, where there has been no trial of rest in bed in favorable surroundings, have undoubtedly been used to exploit the method. Too advanced cases offer only the palliative conditions following a lessened septic absorption. It is not a remedy to be used, except when the size of a cavity indicates the unlikelihood of a closure if left to nature, although it is truly wonderful how much nature alone can do. A heart may be pulled over three or four inches, the diaphragm may retract several inches, the mediastinum contributes its bit by allowing considerable pushing over by the lung that is doing all the work, the shoulder on the affected side droops forward, and the ribs in the X-ray plate are seen closer together by far than on the good side. All this may not close a cavity or arrest activity, and even this much can only be accomplished when pleuro-pulmonary fixation by adhesions assists the pulmonary fibrosis. Is it not obvious that anything which would assist the progress of fibrosis is to be encouraged? It is rarely the case that a lung in which retraction has gone on to a considerable degree is free from pleural adhesions, and these adhesions are many times the reason that pneumothorax fails. Numerous illustrations of how they operate to hold cavity walls from collapse are to be found in any series of plates taken after this procedure. It is sometimes possible by repeated small injections of air to tear away small bands of adhesions or so to stretch them that almost complete collapse follows. Jacobaeus of Sweden has introduced the use of an instrument akin to a large cystoscope, and has met the difficulty of interference of adhesions by opening the pleural cavity after such collapse, as was possible by artificial pneumothorax, and cutting the restraining bands. How relatively easy this might be is illustrated by several of our cases, and while we have not as yet attempted it, we are convinced that in cases with few but effective adhesions successfully holding open a cavity, a trial of it is necessary as a step clearly indicated before thoracoplasty. That one is confronted with the danger of exciting a pyo-pneumothorax must be considered, for a cavity near the surface of the lung is often protected by a very thin wall, and the release of a number of adhesions under pressure might easily put sufficient strain on the remainder to cause some giving way of the wall and the discharge of cavity content into the pleural cavity.

I shall speak only generally of thoracoplasty, since our experience will be presented fully in a later paper, and content myself with the statement that when pleural adhesions prevent the successful collapse of a lung which means the marked improvement of such symptoms as fever, cough and expectoration, and closure of cavities, the arguments that warranted the trial of pneumothorax are equally applicable to thoracoplasty. More careful consideration must be given to the condition of the heart and of the good lung, but even slight activity in the relatively good side is not a contraindication, provided the operation be done entirely

under local anesthesia, as it has been in all of our cases. It has been our experience twice that slight apical activity on the better side underwent improvement and arrest, as the result of the compression of the generally affected side. Archibald's warning of "the importance of demanding that the other lung shall be really sound before one does an extensive thoracoplasty" seems to be at variance with our experience, and there are several questions in connection with this point that need study. First of all, we have seen so many bad results following a general anesthesia of any sort, even gas and oxygen, that we feel this procedure in some of Archibald's cases may have influenced results. All of our cases were operated on under local anesthesia, and not only were the clinicians convinced of improvement in the slight process in the relatively healthy lung, but this was called attention to also in the X-ray plates. Following the operation, those of our patients have done best who spent most of their time on the side on which the operation was done. This has been emphasized by the occurrence of two conditions operating to prevent the end sought by surgery, regeneration of ribs where the periosteum was not removed in toto, and bony union of the cut ends of ribs serving to make the chest wall again rigid and holding open to some degree the cavities we sought to close. The first difficulty is correctible in future, but it is obvious that the cut ends of the ribs are likely to be closely approximated and some union is bound to take place. This can be minimized in its harmful result by the compression of the affected side that follows from the patient lying on it during the early weeks of convalescence.

Archibald whose paper is a most enlightening criticism of the history of thoracoplasty and of his own failures, with a very modest presentation of his successes, draws the conclusion that between the local effect produced by the minimum resection of pieces of single ribs by Spengler and Turban, and the extensive dissection and resection of Friedrich, there is the happy medium of Wilms and Sauerbrück. This procedure has been followed in the five cases thus far operated upon in our group. All of them have been women with extensive unilateral cavitation and pleural adhesions preventing collapse by artificial pneumothorax. All had been under observation a year or more at Arequipa Sanatorium, and most of them had been struggling with their infirmity for many years—two for at least ten years. One of these after leaving Arequipa has been under the care of Dr. Richter and Dr. Whitney for several months. One is still confined to bed, two are at light work, one with no cough or expectoration, and two are convalescing and in a condition of health markedly improved over the state which held before surgical collapse. The full report of these cases will be made at the annual meeting of the California State Medical Society in May of this year, at which time a better estimate can be given of the results of the operations.

OPEN TREATMENT OF FRACTURES OF THE FEMUR*

By CHARLES E. PHILLIPS, M.D., Los Angeles, Cal.

The selection of the best treatment to be followed in a given patient suffering from fracture of the femur can only be made by the surgeon who is familiar with all the variety of methods of treatment. Decision as to the method presents more difficulties, calls for the display of better judgment and more careful consideration of many important factors than the actual technical details of the work itself. Methods are roughly divided into open or operative by which fixation or apposition is attained by fixing the fracture itself by means of grafts, plates, or sutures, and closed or non-operative by which apposition of fragments is secured by the application of external force, usually consisting of traction or postural apparatus.

The open treatment accomplishes better apposition, results in less deformity, less suffering, and a better functional result than achieved by the closed method. For all this, it demands its pound of flesh, which is: The highest degree of operative skill; faultless operating room facilities; well trained assistants; and a mechanical ingenuity that will overcome all obstacles. Furthermore, the patient must be in good enough physical condition to stand the surgical interference with a wide margin of safety.

This paper considers only the open method; the requirements for its proper performance and the penalties for its abuse.

The subject is one that can be handled only relatively. There are so many different factors aside from pathologic condition that the formation of a single rule of procedure requires too many exceptions. Differences in skill, training, and, let us say, temperament, would lead three men whom we will designate by the three common proper names of Smith, Jones, and Brown to treat a certain patient under uniform circumstances by three different methods. This is as it should be. But when Smith attempts to do it Brown's way or Jones's way, he may be unsuccessful and blame the method, when in reality it is an unfortunate selection—from both Smith's and the patient's standpoint. In other words, a man doing work in a certain way becomes proficient in his methods and gets good results where someone less familiar with that particular procedure may get failures. This accounts for some cases of unnecessary disability, dissatisfaction, and legal procedures, and it explains why some patients have become a burden on their relatives, friends, or municipalities. Only surgeons familiar with fractures should treat a patient with a fractured femur. Ignorance or careless work

are bad for the patient and the profession. Improper use of casts in unskilled hands is particularly dangerous because the result does not become apparent early enough to be corrected. The cast may make them both, the surgeon and the patient, feel better as long as it is on. When it is finally taken off disillusionment occurs. The leg may be crooked, twisted, and short.

The surgery of fractures of the femur may be divided into emergency and elective.

Emergency operations should be limited almost entirely to compound fractures. Injuries to blood vessels or nerves may necessitate emergency treatment but their occurrence is rare.

Elective operations bring us face to face with considerations of (a) Patient; (b) Surgeon; and (c) Hospital.

The Patient—The patient wants to know if the operation is safe: Will it reduce disability commensurate with the dangers incurred? Operation is indicated whenever faulty position exists which cannot otherwise be overcome; when interposition of tissue is liable to cause non-union; when there are lesions of skin preventing application of traction or proper fixation apparatus; and when the condition of the patient renders conservative treatment more dangerous than the open operation.

The Surgeon—The surgeon should be satisfied that he has a clear conception of a plan of operation that will remedy the condition—whether it be a removal of interposed tissue, restoration of displaced fragments of bones, or fixation so traction will be unnecessary; that he has the ability to do the work efficiently and with an absolute aseptic technique; and that he has skilled assistants who will not jeopardize the result by a lack of understanding and breaking down of the technique during the operation.

The Hospital—The hospital should be able to insure perfect aseptic operating-room conditions including proper sterilizers and controls, aseptic sutures, dressings, and solutions which are checked up by laboratory tests at frequent intervals. The operating-room service should be competent, thoroughly familiar with Lane's technique, and capable of following it.

With an assurance on these points as they relate to patient, surgeon, and hospital the operative treatment of the fracture of the femur immediately becomes the treatment of election in a large number of cases. In discussing surgical methods we are on a road with many branches—some suitable in this case, others in that. Not only personal experiences must be employed in the selection of methods, but the experience of others must be utilized. The object of the operation must always be uppermost, while the selection of the means is being considered. If fixation is the aim, a variety of means to bring this about are presented. If a defect is to be supplied one should not consider the insertion of foreign bodies. Likewise, if a non-union is present, a Lane plate should not be used. In general non-union should

* Read before the Los Angeles County Medical Society, April 19, 1923.

be treated with bone grafts and fixation; simple recent fractures should be treated by the insertion of a minium amount of foreign material to bring about the fixation and when foreign material is used it must be remembered that the longer the foreign material remains in situ the more objectionable it becomes.

The method of choice is fixation without employment of foreign substances, that is, by the use of autogenous splints from the patient's own living bone. This furnishes the strongest splint. The character, location, and direction of fracture or the extent of the operation necessary may render the use of autogenous splints inadvisable, so we would next think of some absorbable material to bring about fixation. While this possesses the advantage of disappearing by absorption after it is no longer needed, yet it does not always give support long enough. Disintegration may occur before healing has taken place. Bone pegs and bone screws are the most common examples of partially absorbable substances.

Again, we may resort to the insertion of non-absorbable substances to achieve fixation. The Lane plate is the most common example. It has also the distinction of being more used and more abused than the others. There are two indications for its use. It offers more fixation for less skill than any other substance and its application takes little time and is attended with only slight shock. At one time the use of Lane plates was considered harmless but the remote effects have multiplied until now many who still continue to use them always counsel their removal as soon as healing takes place.

While there is seldom any great urgency in the treatment of a fractured femur I believe there is a physiologic reason for operating before the process of repair has progressed far. The operation should be performed when the patient has reacted from his shock; certainly within the week following injury.

In conclusion I want to emphasize that, where indication for operation exists, the operator should be sure the patient can stand the contemplated work with a margin of safety and that the operating technique is above reproach—including hospitals, assistants, instruments, and materials. These positive injunctions should insure successful work. The dangers of the operation are consistent with the improvement expected. With painstaking care and study no department of surgery offers more satisfactory results than surgery of the femur but, without adequate preparation, dissatisfaction and damage suits should be provided for.

Surgeons are becoming more and more convinced that the operative treatment of fractures of the femur should be limited to a few who master the work. These few must be especially trained, resourceful, and painstaking. They must work in operating teams and have as good facilities as can be procured. When this combination is reached, operative treatment offers the best results in the treatment of these difficult cases.

MEDICAL HISTORY AND TRENDS OF PSYCHOANALYSIS *

By ROBERT LEWIS RICHARDS, M. D.

It is the purpose of this paper to show:

1. The importance of the individual in both mental and physical diseases and the similarity of the two classes of diseases;
2. The manner of mental growth of the individual and his war with his instincts;
3. A brief history of the medical efforts of the past century to overcome these difficulties for the individual;
4. The present status and trends of these efforts in psychanalysis.

It is hoped in this way to show the logical progress in the efforts of medical science in this direction and thus to give clearness of view and to remove the confusion which seems to hamper medical efforts at present.

Medically we have come to think too exclusively of bodily cells and their changes, of bacteria and their relationships, and of physio-chemical changes in bodily fluids. The individual with his mental endowment is too frequently lost sight of when, in point of fact, every consultation is an agreement with an individual to place him if possible in a position of better and more comfortable living.

On the mental side in particular it behooves medicine, therefore, not only to study psychoanalysis and its trends, but also not to leave the subject so much to various cults and the uninformed who so far have largely possessed the field with very questionable aims and no knowledge of the facts of mental diseases. The market is flooded with books on "psychoanalysis" of doubtful value. Lectures on so-called "applied psychology" are advertised everywhere.

Psychology, on the other hand, can not safely have to do with mental diseases unless it has knowledge of all the facts of mental diseases. It was very unfortunate in one instance for psychology, as well as the individual, when it called a case of demented paresis a case of feeble-mindedness of such and such a grade, because the individual failed on certain mental tests. There are abundant medical indications of paresis. A psychologist was perhaps consistent in another instance in speaking of depressions, fears, etc., as being functional changes and defects. But the problem is not as simple as muscular defect, and we can not simply replace the emotional defect by grafting a new attachment or implanting another emotion. One must know the etiological factors, the bodily conditions, fatigue, the mental conflicts, etc. The two fields of psychology and psychiatry are interrelated, but the relationship is that of physiology and pathology. The individual with a mental abnormality or mental disease who encounters the partly informed or misinformed person is exceedingly unfortunate. Thus you must admit in the

* Read before the San Francisco County Medical Society, September 12, 1922.

following case summary that so-called "applied psychology" was the strongest etiological factor:

Mary C., age 38; single. Hereditary data unimportant. Make-up—hypersensitive. Personal history showed: Average schooling and mental progress; physical handicaps of a healed tubercular spine and partial blindness; occupational record of nursery governess and no home life; evident obstacles to the mating instinct and an over-valuation of the same.

Such an individual on one of her few vacation periods was thrown last winter in San Francisco into the maelstrom of so-called "lectures on applied psychology" and "psycho-analysis." She became convinced that "one had what one wished for sufficiently." Hence she recalled her thwarted desire to mate and conceived the belief that she was mentally married to the lecturer. Conflicts naturally arose and she became so excited and noisy that she disturbed her boarding house and she was committed to a State hospital as a public nuisance. After a period of treatment and readjustment to facts she fully recovered and went home.

I have other similar records of cases in which similar experiences provoked mental diseases. This case, however, illustrates the point sufficiently clearly.

It is generally agreed that mental life begins with certain primal instincts hereditary in origin. This hereditary is both personal or parental and social or group in character. These are what Edmon calls the unlearned knowledge because they do not come through experience or learning. They may be divided into three main divisions but are closely interrelated and some are found in all of these divisions:

1. Personal division.
2. Race continuation or reproductive division.
3. Group or herd division.

The personal division includes self-preservation, hunger, fear, danger, fighting, sense gratification, and sex tendencies.

The reproductive division has to do with instincts of parenthood and of food and shelter for the family. Naturally, instincts of the first division appear in the second division, but in a different relationship and with a different aim. The entity of the second division is strikingly illustrated in the dominating maxim of the Mormon church, viz., "The greatest expression of love is reproduction of the species."

The group or herd division is the tendency without reasoning or comprehension to do whatever the group does. Animals tend to have and follow leaders. Human beings without reasoning follow social customs, gather in nations and races, and recognize the superiority of these needs over any personal needs. Crowds riot and lynch. Man is imitative.

As stated by W. H. H. Rivers, instincts have certain laws of action which distinguish them from other motives for action.

1st. Instinct of itself does not discriminate or

question. The impulse is powerful and the functioning is associated with a feeling of personal gratification.

2nd. An instinct is unitary in character and operates with all available energy. Sometimes this is called the "all or none" principle.

3rd. The action of an instinct is immediate and uncontrolled.

When one considers these laws of action, which observation and reflection show us to be true, it is evident what powerful factors they are in the mental life of an individual and how much they determine human behavior.

As an individual grows it is evident that, from his knowledge and experience, he must discriminate between instincts and control them. This is evident because one instinct conflicts with another instinct, because personal instincts conflict with reproductive instincts and group instincts, and because these instincts have relative values in establishing the best manner of human behavior. Because of these struggles and conflicts between instincts it is the resulting habits or methods of behavior that become the predominating aware motives, and we are less conscious of these pre-existing instincts. We may become even unaware of these primal instincts and the great pre-pubertic battles of the instincts with victorious habit formation. In speaking of the power of these habits of life William James said "the habits of thought and action become so dominating that by twenty-five years of age we have become largely a bundle of habits."

It is generally recognized that development means conflict. It is also true that victory is not always complete. The warfare may change form, but continues. Instead of battles we may have guerilla warfare. Instead of "inass assaults" we may have the "filtering through of squads for a renewal of conflict at the more favorable location." In such conflicts we have all grades and kinds of wounded. The slightly or moderately wounded are the psychoneurotics who have surrendered with a compromise adjustment on their part rather than again enter into conflict. The more severely wounded are the more complicated anxious psychoneurotics. Some few are defective from birth and develop psychoses. The wounded in this conflict afterward become the disabled misfits or qualitatively defective individuals, sometimes called psychopaths. They are quite different from the quantitative defectives, who lack in quality of intellect but may have good qualitative mental endowment.

Psycho-analysis has to do with an analysis of the mentality of an individual, which we have seen begins with warring instincts and develops into habits of human behavior. It is evident that one must have the data as to hereditary influences, as to developmental progress, and as to the difficulties previously encountered as well as the present difficulty. No "present status" will suffice here, as it does in so many physical diseases.

In the course of any such analysis it soon becomes evident that the individual cannot give us

all the facts and that he is particularly obscure as to the happenings of the first ten years of his life. Evidently we here approach the greatest battle with the instincts and great repression of occurrences from consciousness. Many varied efforts have been made to learn of these conflicts and the resulting trends. If we study these efforts chronologically from medical history of the past century we shall see a logical, if not a continuous, progress, and form an idea of the tendencies.

The main principle of mental growth—that of being accessible to outside ideas—was stated in 1830 by Feuchtersleben as follows: "He who is always elastic is free; he who continually draws himself together petrifies." The ability of the individual to dominate difficulties and be master of the situation was exemplified in the life of Kant, and in 1840 he wrote a monograph on "The Power of the Mind Through Simple Determination to Become Master Over Morbid Ideas." A little later Wettersbrand, in Holland, began using psychotherapy in practice, although he did not apparently understand the method of procedure. Evidently by hypnotic sleep he provided a period of rest and recuperation for his psychoneurotic patients. The people came in large crowds to what they called his "Palace of Sleep."

More definiteness of approach is found in the efforts of the French in the period 1880-1890. It was in the famous Nancy School under Charcot and culminating in Janet that the power of suggestion was described and established; that its dynamic qualities were established (largely by Liebeault) that the facts of dissociation were studied and described (largely by Janet) and that we first had an approach to a real psycho-analysis.

It was about 1894 in Vienna that Breuer studied the action of complexes and clinically showed that this repressed conflicting emotional factor, when brought into the consciousness of the individual, lost most of its power and permitted an adequate adjustment and recovery. It was in 1894 that Freud began an intensive study of the details of the mechanisms involved in this phenomenon, i. e., the unconscious action of dissociated conflicting emotional factors in the life of the individual. Freud's theory in brief is that these conflicting emotional factors or complexes are either brought to consciousness and placed in their proper relation to the life of the individual or they remain in the unconsciousness and are converted into another form with the full emotional value of instincts and produce reactions elsewhere in the individual. They may, however, by psycho-analysis be brought into consciousness, rationalized, and sublimated into useful activity. But Freud singled out the sex instinct as the one factor in the conflict, and to support this theory and his dream-analysis, was driven to an elaborate unconvincing symbolism. This has caused great opposition and confusion such as half-truths often do.

Hence, in 1910, Jung chose the general term of the 'urge of life forces,' rather than a sex urge, and supported this theory in a convincing way.

The powerfulness of the instinct of self-preservation in the recent war psychoneuroses has proven the inadequacy of the claim of Freud for the all-pervasive character of the sex instinct and its conflicts. We have seen in these war psychoneuroses not only the more crude forms, such as functional paralyses and special sense losses, but also the more complicated anxiety states explained and relieved on the basis of conflict with the instinct of self-preservation. The importance here of the sex instinct was negligible. Jung still further connected psycho-analysis with human behavior by showing the part played by instincts in mythological and totemistic thought-products of primitive peoples. In the confused phantasies of demented patients he demonstrated in the basic facts a wish-fulfillment clothed with much symbolism and oddities of speech.

In 1911 Adler approached the subject of psycho-analysis from an experience in histopathology. He had been studying bodily organs, the relative superiority of some organs and their substitutive action for each other, as well as their general bodily relations. He noted an increase in symptomatology and apparent disability of disabled or inferior organs when attention was centered on them. He analyzed the underlying facts in psychoneurotics and found a flight from reality into a realm of phantasy and associated with wish-fulfillment. Psychoneurotics, like primitive people, tend to hide from real difficulties, and in their lives of fancy pretend that the difficulties do not exist. In fact, of course, the difficulties continue to exist and have greater power under such circumstances. To face the issue and take up the conflict requires what Adler calls the "manly protest" against this constitutional inferiority and the declaration of independence from fancy. It is this he strives to secure. The real independence of an individual must be based on facts and not on fancies. Facts are known things, and can be faced much more successfully than fancies, although at the cost of effort. But in all this Adler chiefly wants to exclude the sex instinct—at least, the all-pervasive character given it by Freud.

Steckle, in his last 1921 edition, agrees with Freud in the all-importance of the sex instinct, for which there is apparently a local or geographical explanation in each case, but he traces the roots of the sex difficulty into a psychic conflict of hereditarily burdened people. He says, "We find always psychic conflict on the basis of heredity, environment, education, or internal secretions." This conflict has to do only with the affective or emotional side of man, and therefore the various manifestations of psychoneurosis show quantitative and not qualitative differences. Thus, anxiety is an incomplete conversion, and hysteria a complete conversion, which would seem to indicate, in other words, a continued resistance in anxieties and a complete surrender of the individual to hysteria. Transferring this idea to military experiences, it seems that we have in hysteria or "the private's psychoneurosis" a lack of resistance and in the anxiety or "the officer's psychoneurosis" a greater resistance. Both Freud and Steckle in-

sist that Janet's dissociation is only the initial step and that conversion of the effect is the important point. But while Freud finds qualitative differences in these conversions, Steckle finds only quantitative differences in an individual, with faulty heredity and environment, and certain bodily conditions. Steckle would introduce the term paropathy for such cases of conflicts between effects or feelings without intellectual defects. For the intellectual conflicts he would introduce the general term paralogy. Under paropathy, then, he would classify the anxieties as incomplete conversions, the hysterias as complete conversions, and the phobias as compromises between two effects. Steckle also brings some clarity into the confused field of hypochondriasis by classifying into the following forms, viz.:

1. Nosophobic or anxiety form;
2. Hysterical form;
3. Obsessive form;
4. Paranoid form.

It would then seem that the Vienna differences of opinion have mainly to do with the placing of emphasis. All agree in the conception of a conflict having to do with repressed emotional factors. Freud insists upon the supremacy of the sex instinct. Adler emphasizes the mechanism of the conflict. Steckle opposes Freud's supremacy of the sex instinct and accepts Adler's idea of constitutional inferiority. Steckle admits that the "re-educative" measures of the French and the "persistent pressure" of the English accomplish the same results, but insists that psycho-analysis offers a speedier, more complete, and more lasting result. Or one might say that Steckle means that the teaching or authoritative attitudes of the French or English represent pressure from without and more dependence upon authority, while psycho-analysis works from within and leaves the patient in possession of the information about himself.

These various points of view, however, indicate medical study and medical progress comparable to study and progress in other medical fields, and properly a part of medical history.

The simplest statement of the uncontroverted points is found in Bernard Hart's "Psychology of Insanity." He distinguishes between the physiological and the psychological approaches to mental diseases without disparaging either approach. Under the term physiological approach he includes the cerebral cortical changes corresponding to any given mental state. There are natural limitations to discernment of cortical cell changes or any cell changes. We can distinguish degrees of functioning and diseased conditions, but we can not distinguish all the kinds of functioning or all the relationships of cells to each other with our present methods of approach.

Hart therefore takes up in more detail the psychological approach, and endeavors to establish what, if any, are the underlying laws of mental action. By collecting the mental facts, by classifying these facts, and by seeking the laws of their relationship, he has come to certain conclusions.

He finds that the laws of dissociation, suppression, repression, conversion, and rationalization, which correspond with previous experiences of investigators, explain the fundamental facts of mental diseases. Naturally this psychological method of studying mental facts gives more detail and laws of action than one could reasonably expect from the present physiological approach or pathological knowledge of the cerebral cortex. Hence, in our study of the trends of psycho-analysis, we have purposely kept to the psychological side, and not the physiological side.

From the study of the trends of psycho-analysis during a century, it seems to me that we have a history of continuous growth and orderly progress; that we have today a broader and clearer view of our aims and methods of achieving those aims; and that this progress is part of the history of medicine and not personal or more than incidentally touching other realms of science. Hence, medicine should accept and protect from ignorant exploitations these essential medical facts and not concern itself with incidental mistakes of individuals and personal quarrels.

I hope that, in these days of confusion and conflicts, medicine will as in the early days of her history look with clear unclouded vision on the facts of life, hold fast to that which is good and with no uncertainty indicate the path of proper mental as well as physical living.

SUMMARY.

We have traced the initial idea that mental factors could be studied and controlled, as physical factors are studied and controlled, to the point of producing mental rest and recuperation; then to a study of the factors causing the mental symptoms; then to the methods of action of these factors and to their relative powerlessness when understood. We have noted that all this centers about an individual who grows mentally as well as physically and who suffers accidents mentally as well as physically and must obey certain laws of mental growth.

Finally, we have endeavored to indicate that medicine in psycho-analysis, viewed in its broad sense, gives the individual his best chance for mental freedom and the fullest mental growth.

Intracutaneous Reactions in Pertussis—Thomas G. Hull and Ralph W. Nauss, Springfield, Ill. (Journal A. M. A., June 23, 1923). used nine different preparations of pertussis vaccine, and 341 injections were made intracutaneously. The work was done at an institution where an epidemic of whooping cough was developing. The ages of the children tested in most instances were from 8 to 12 years. The results of the investigations recorded do not indicate that the preparations of pertussis bacilli can be used intracutaneously to diagnose whooping cough. Freshly prepared suspensions, suspensions 3 years old, suspensions killed by heat and suspensions killed by chemicals gave results that were conflicting. Nearly all children, whatever their ailments, gave positive reactions. Whooping cough patients at times gave negative reactions, however.

EDITORIALS

INDEMNITY DEFENSE FUND DISCONTINUED

All of the 1349 members of the Indemnity Defense Fund should carefully read the resolution of the House of Delegates published on page 351 of this issue of the Journal. This resolution authorizes the Council to discontinue Indemnity Defense as an association undertaking. A letter, embodying and explaining this resolution, has been sent by the secretary to all members of the Fund. No new members will be accepted in the Fund, but those who are already members will be protected under the terms of the Fund until due notice has been given and opportunity presented to transfer the protection to a "blanket policy"—coverage now being negotiated by the Council in accordance with resolutions of the House of Delegates.

The two actions taken by the House of Delegates in discontinuing "Medical Defense" and "Indemnity Defense" by the association might, upon cursory examination, seem like a backward step. If the Medical Association was an organization devised to transact business with other business organizations it could not only handle its own insurance and defense as an organization, but it could do many other things worthwhile for physicians and particularly for the public whom they serve. However, with the loose democratic type of organization which cannot and probably should not be changed, it is utterly impossible for it to engage in any movement requiring mass action along business, as distinguished from professional, lines. After years of study and experience with Medical Defense and Indemnity Defense, two of the simplest of propositions from a business standpoint, the Council has wisely recommended the change of policy outlined in the resolutions.

It now remains to be seen whether a sufficient number of members desire to manifest enough cooperation to insure the success of a "blanket policy," so advantageous to all wishing protection in practicing their profession without the worries so often promoted by the vagaries of unhappy and disappointed sick people. The physician who today engages in the hazardous vocation of the practice of medicine without adequate legal and indemnity protection is blind to his own future welfare and negligent of the future of those dependent upon him.

MEDICAL DEFENSE TO BE TERMINATED

Every member of the California Medical Association should carefully read the resolution passed by the House of Delegates on June 23 relating to Medical Defense. The resolution with explanatory comment is published on page 351 of this issue of the Journal.

Medical Defense, as one of the perquisites of membership in the California Medical Association and paid for out of the dues, always has been

criticized by some members for one or more of several reasons. Nothing would be gained under present conditions by reviewing these reasons. Some of them are important and from a standpoint of fairness have merit. Others are but the excuses of those who do not really wish to co-operate with their fellows and who take advantage of opportunities to offer destructive criticism.

The important points to be borne in mind by all members are (1) that malpractice suits or threatened suits arising out of your professional service after June 30, 1924, will not be defended by your association; (2) a plan is being worked out for an optional defense and a blanket policy for those who desire it and are acceptable from an actuarial standpoint and are willing to pay for it; (3) when the obligations of the association to its members have been fulfilled, the decreased work will make a decrease in dues possible.

INDUSTRIAL PHYSICIANS AND SURGEONS SERVICE CARDS

The alleged abuse of the provisions of the Workmen's Compensation Law regarding the substance, methods of distribution, and uses of medical service cards has been for a long time the source of controversy and, in some instances, drastic disciplinary action in some sections of the State. Upon due application the matter has been brought before the Council with a request for a ruling. The subject has had extensive and earnest consideration by a special committee, by the officers of the association, and by the Council as a whole. At a meeting of the Council on June 23, 1923, the following resolution bearing upon the subject was passed unanimously:

Resolved, That it is the opinion of the Council of the California Medical Association that all medical service cards should be the property of the insurance carrier and/or the employer where such card is displayed. It is also the sense of the Council that all the expense of providing medical service cards should be borne by the insurance carrier and/or the employer; and be it further

Resolved, That it shall be considered unethical conduct on the part of any member of the California Medical Association to permit his or her name to appear on any medical service card unless the name of the insurance carrier and/or the name of the employer appears in bold type at the top of the medical service card, and that no reading matter shall appear on the medical service card with reference to the physician or surgeon, except his or her name, office location, and hours and telephone numbers; or to print, distribute, or use any medical service card. It will be proper to have on the medical service card the necessary hospital and ambulance service information; and be it further

Resolved, That all medical service order blanks shall have at the top of the card "Medical Service Order of" and insert here the name of the insurance carrier and/or the employer. The medical service order blank should be printed in such manner as to clearly indicate that it is a medical service order from the insurance carrier and/or the employer, and not a medical service order blank of the physician or surgeon, himself.

It is hoped and believed that compliance with the provisions of this resolution will solve an irritating problem to the satisfaction of members of our association, the insurance carriers and em-

ployers, and the beneficiary employees. In any event, we at least have an official ruling from an officially constituted body upon the question. Under the constitution and by-laws of our association this ruling is binding upon every member of every county society holding a charter from the California Medical Association.

THE CALIFORNIA MEDICAL ASSOCIATION

The report of the Committee on Codification and Revision of Constitution and By-laws made its report to the House of Delegates at the 1922 session of the State society. In conformity with the requirements of the constitution and the vote of the House of Delegates this report was published in two issues of the Journal and came finally before the House of Delegates June 23, 1923.

The report as published in the June issue of the Journal was adopted. The only change made was that of requiring a two-thirds vote to amend instead of the three-fourths vote provided by the committee. The new revised constitution and by-laws are now in effect. Members have a copy in the June number of the Journal and those desiring a copy printed in pamphlet form may secure it by sending a request to the secretary.

Under the new constitution, the name of our organization is changed from the Medical Society of the State of California to the California Medical Association. The new name represents more accurately what the organization is and what it stands for. The old name was long and cumbersome and the use of the word "State" after California has been superfluous for years. Surely California is now old enough and well enough known as a State to risk leaving off the label.

The revised constitution and by-laws provide for a new class of members to be known as "Affiliate members." The requirements for "affiliate" membership are exactly the same as for "membership," except that the dues are one dollar a year to our association and one dollar a year to a county society. This new class of membership is designed to hold the interest and co-operation of those worthwhile "doctors of medicine" who have retired, are permanently incapacitated, or who for any other reason satisfactory to the Council can no longer take full duty as earning physicians.

There are other provisions in the constitution and by-laws that should have careful study by officers of county societies and, for that matter, by the membership as a whole.

Hemoperitoneum From Ruptured Corpus Luteum—In the case reported by Abraham Strauss, Cleveland (Journal A. M. A., May 5, 1923), the diagnosis was not made preoperatively. On account of the extreme pallor and abdominal signs, a ruptured ectopic pregnancy was first considered. This was rejected because of the menstrual history, although it is well known that these sometimes occur without the patient's missing a period. Therefore, considering the abdominal signs with free fluid, the low fever and low white count and pallor, the diagnosis of fulminating peritonitis with the patient in shock was made.

STATE SOCIETY

REPORT OF THE COUNCIL

Presented at the fifty-second Annual Session of the California Medical Association

By JAMES H. PARKINSON, Chairman

DOCTOR C. G. KENYON

It would be impossible to submit the report of the Council without mention of one who was its chairman for twenty-three years, or since the Council was first instituted. Doctor C. G. Kenyon joined the society in 1874, served as assistant secretary (1882-1883), member board of censors (1887-1888), member board of examiners (1883-1887), vice-president (1879-1880), president (1893), and councilor (1900-1923); on active duty for thirty years of his forty-eight years of membership. Faithful and conscientious in attendance, earnest and sincere in his efforts for the welfare of the society, he leaves a record that few can hope to equal. His sudden taking off, when still actively useful, but fulfilled an oft-expressed wish that he might not live to be useless. Will not that wish find a sympathetic echo in many a heart?

DOCTOR B. F. KEENE

While speaking of our honored dead, the Council wishes to call the attention of the society to the neglected grave of its first president, Doctor Benjamin F. Keene. Some weeks ago, an unknown tourist informed the travel bureau of the Sacramento Chamber of Commerce that a fallen and broken tombstone in the city cemetery at Placerville marked the last resting place of the first president of the State Medical Society. He thought it merited attention. Through the courtesy of Mr. Louis A. Reeg of Placerville, the grave was readily identified, and the facts found as stated. The California State Medical Journal of October, 1856, contains an obituary, together with resolutions adopted by the Sacramento County Medical Society, and the San Francisco County Medico Chirurgical Association. Doctor Keene was elected president in April, 1856, and died suddenly on September 5 of the same year, being forty-three years of age. The council recommends that a new headstone suitably inscribed be provided.

MEETINGS

The Council has held its regular quarterly meetings, and one special meeting in September, 1922.

The publicity bureau has held twenty meetings during the year. Thirteen questions were submitted to the Council by mail ballot.

In May, 1922, Doctor Howard H. Johnson (Major, M. C., U. S. A., on leave of absence), upon recommendation of Doctor Musgrave, was appointed associate secretary at a salary of \$4000. This was made possible by Doctor Musgrave's refusal to accept further salary. On January 31 Doctor Johnson was compelled by ill health to seek medical attention. He spent four months in Walter Reed Hospital, Washington, D. C., and was returned to duty, having been refused further leave

of absence. Subsequently Doctor Johnson resigned from the service, but as he has other plans for the future, his formal resignation as associate secretary has been accepted by the Council.

In March, 1923, Doctor Musgrave placed his resignation as secretary in my hands, stating that under no circumstances would he allow his name to go before the Society for re-election. Unfortunately, up to this time, the Council has been unable to find a suitable successor. Doctor Musgrave later stated that it was quite impossible to do the work necessarily devolving upon him as chairman of the committee of arrangements of the A. M. A. and, at the same time, be responsible for the affairs of the society.

In this great emergency, Doctor Emma W. Pope agreed to take charge of the office, and the Council "gratefully confirmed her acceptance." Doctor Pope's management has been quite satisfactory. Doctor Musgrave has consented to be responsible for the management and conduct of the Journal, and as Doctor Pope has agreed, if the society desires it, to continue in charge of the office, the Council will trust that this most efficient combination may be preserved until permanent arrangements can be made.

The point that must here be considered is, the time has come when the conduct of our business requires the full time service of a capable and experienced medical man, who shall make the secretaryship his sole occupation.

In June, 1922, the office staff was reorganized for what seemed the best interests of the society. The present staff has been found most satisfactory.

On August 21, 1922, the offices of the society were moved to the Balboa building. A change in the management of the Butler building, where we had been since 1908, was accompanied by notice of an increase in our rent to \$147.50 a month and the conditions that a three-year lease must be signed and the rent personally guaranteed by some member of the society who was financially responsible. It was found that much better offices of larger size could be had in the Balboa building at a rental of \$125 a month and with no conditions attached. The Council promptly accepted the opportunity and the transfer was made.

Commencing with the issue of October, 1922, upon recommendation of the editor, the Journal was enlarged by sixteen pages.

The Council's Committee on Industrial Accident Insurance was continued, and will submit a final report.

RELATIONSHIP OF SECTION TO STATE SOCIETY

I am directed by the Council to submit the following resolution, originally adopted by the Publicity Bureau and confirmed by the Council at its 134th meeting held at Pasadena, September 8, 1922, as outlining the relations between the central office of the society, the Council and the various sections.

"Resolved, That the relation between officers of sections and the central office of the State society should be more intimate in the handling of affairs, which arise from time to time throughout the year, and further, that conferences and consultations between the State society and these sections on

such subjects should be encouraged, and further, that such section officers are, so far as the constitution and by-laws of the A. M. A. and the State society permit, officers of the State society, whose duties are as above outlined in addition to those of arranging and conducting the program of the annual meeting."

SERVICE BUREAU

There seems to be a very general misunderstanding in connection with this type of advertising, and a good deal of criticism has been aroused and offered. As some of this has been personal to the editor, it seems proper that the facts should be placed before the society. On July 17, 1922, Mr. Mattson, manager of the Co-operative Medical Advertising Bureau of the Journal of the A. M. A., issued a circular to all affiliated State Medical Journals, stating he had obtained a number of advertisers that had not hitherto patronized Medical Journals, and that he was prepared to sign them up if the Council approved of the proposition. The conditions were that one firm only in the particular line would be selected, that the advertising matter would conform to the standards of the Journal, and that a circular letter to the membership was to be issued by the Bureau of the A. M. A. or by the advertiser or by the State society; in any event, the cost to be borne by the advertiser.

As the estimated amount of revenue involved was a substantial sum, and as all the conditions seemed perfectly legitimate, the offer was accepted. The advertisement of E. H. Rollins & Sons, the well-known bond house, which was first on the list, appeared in the Journal for September. A news item calling attention to the advertisement appeared in the same issue.

The entire responsibility for the transaction rests with the Council, the editor having nothing whatever to do with it except to supervise the publication of copy as furnished. The Council submits the question of continuing this type of advertising to the House of Delegates for its decision.

The Council deems it necessary at this time to point out certain phases and conditions in the affairs of the society and in the conduct of its business that must be seriously considered and adequately dealt with.

The actual growth of the society has largely increased the work of the office, while the publication of the Journal and the conduct of medical defense and indemnity defense have added to its responsibilities.

CALIFORNIA STATE JOURNAL OF MEDICINE

The Journal, which was established in November, 1902, has also been keeping pace with the membership.

Under Doctor Musgrave's able management the Journal has steadily gained in income until it is now, with the one dollar added from the annual dues as required by the postal laws, self-supporting. The editor assures me that the Journal can be made not only self-supporting, but revenue-producing.

In this connection I would remind the society

that the Journal is now the official organ of the Nevada State Medical Society and of the Utah State Medical Association. Doctor Musgrave informs me that other States have signified their intention to apply for similar affiliation.

MEDICAL DEFENSE

This was established as of July 1, 1909, and so far has functioned most satisfactorily and economically.

Medical defense, as defined in our by-laws, means, of course, a member's right to the services of our attorneys and the payment of court costs in an unwarranted action by a patient against him for alleged negligence upon his part, or upon the part of those for whom he is legally responsible. The merit of the member's position is always determined by the Council, or its committees and officers.

The number of these claims and cases and the almost uniform result in favor of the doctor before the courts, strikingly illustrates the necessity of a fuller understanding upon the part of the public of the classical comment of Chief Justice Taft:

"A physician is not a warrantor of cures. If the maxim, '*Res ipsa loquitur*,' were applicable to a case like this, and a failure to cure were held to be evidence, however slight, of negligence on the part of the physician or surgeon, causing the bad result, few would be courageous enough to practice the healing art, for they would have to assume financial liability for nearly all the ills that flesh is heir to."

Under the direction of our able general counsel, a legal staff has been organized throughout the State. The profession, therefore, now has at its command the services of able attorneys with special knowledge and special training in this particular field. Some confusion seems to have arisen in the minds of the profession regarding joint medical defense. Doubts have been expressed as to our capabilities for defense, and in relation to the adequacy of our resources because members have been advised to take policies in commercial companies and, when already carrying them, under no circumstances to discontinue. The explanation is very simple. Should a judgment against a member of the society, who is not a member of the Indemnity Defense Fund, be sustained by the court of last resort, in the absence of other insurance, this judgment must be met from that member's private resources. If he be a member of the Indemnity Defense Fund, he has available \$5000 toward meeting such judgment. A policy in a commercial company adds the sum of \$5000 or more with half the court costs and a proportion of the attorney's fees.

On May 16, 1923, a judgment of \$25,000 was rendered against a member of this society. How many of us are in a position to meet that sum without serious impairment of our resources?

The ability of the society successfully to conduct the business of medical defense in competition with commercial companies, and the adequacy of the resources to meet liabilities against fund members has been constantly demonstrated. So far the services of the legal department have been

an unqualified success. Up to date no suit has been definitely lost, and all claims against our funds have been liquidated. As a matter of fact, medical defense in all suits against our members, whether solely by us or jointly with commercial companies, has been conducted by or with the active participation of our legal department, whose extended experience and special knowledge is generally recognized. All bills have been paid to date and we are still solvent.

The figures that are available plainly show that an increase in expense which is beyond our control, can only be met by an increase in the annual assessment. That this will have a most unfavorable effect upon our membership and, what is more important, upon the membership of the county units, is conceded by every one that has had practical experience in organization work. Assuming, for the moment, that our membership would be unaffected, the conduct of this business upon an assessment basis is a responsibility that none of your officers care to assume. The power to fix the annual dues from which the expenses are met is definitely in the House of Delegates, but the amount so raised must always be a matter of uncertainty. It will only be equal to the sum that is contributed voluntarily.

The House of Delegates by resolution decided last year that medical defense by the society could not be continued upon the present basis because of the steadily increasing cost to the society as reflected in the annual dues. The resolution is as follows:

"Whereas, the secretary has explained that the increase in the dues this year depends upon three factors: Extension work, industrial accident insurance adjustment bureau, and medical defense, and

"Whereas, of these items that of medical defense is by far the largest; therefore be it

"Resolved, That the House of Delegates instruct the Council to present at the next annual meeting a plan by which the legal defense will be limited to those members who desire to receive and to pay for same as a separate charge; and that the assessment for medical defense be segregated from the general dues, so that the dues may not be subjected to a possible advance for that purpose."

INDEMNITY DEFENSE FUND

Medical defense as effected by the society runs to attorneys' fees and court costs only. It was recognized that the revenues of the society would not cover possible judgments, nor could settlements be effected where adverse judgments had been rendered, or in those cases, having merit, where it was deemed improper to go into court, or where the cause of better medicine was best served by such settlement.

To meet this situation, the Indemnity Defense Fund was created in December, 1916. The initial payments were placed at \$30, half cash, balance by note payable in one year without interest. The Fund was to become operative when 300 members had joined. The right to levy assessments was definitely specified. The custody of the Fund was

placed in the hands of three trustees, and its revenues were kept entirely apart from the society's funds. Expenditures from the Fund were made upon direct authorization of the Council and were paid by the Board of Trustees. One assessment of \$10 was levied in 1922.

A situation has arisen with the Fund precisely similar to that in the defense feature of the society; namely, it will only be possible to maintain a sufficient reserve by more frequent assessments upon Fund members. This is open to the same practical objection that lies against constantly increasing dues for medical defense. Realizing a situation that was unsatisfactory from every standpoint, the Council sought and obtained from the society at the annual meeting of 1922 authority to organize an insurance company under State law that would provide adequate medical defense and the payment of possible judgments up to the limit of any insurance company operating in this field.

The Council having canvassed the returns on prospective incorporation and having analyzed the apparent sentiment of the profession throughout the State, finds that the plan is not acceptable. The Council now asks authority to terminate medical defense at such time and upon such notice as will be consistent with the interests of the membership, if possible, not later than June 30, 1924, and necessarily to discontinue the Indemnity Defense Fund upon the same basis.

The Council further requests authority to maintain for those who want it, a plan of insurance through commercial carriers retaining, if possible, the present legal department. This plan, when in operation, will make possible a reduction in the annual dues.

It is obvious that abandonment of all defense by the society eliminates a positive factor in the control of premium rates by commercial companies, which would then have the exclusive field in what seems to be regarded as undesirable business by practically all the carriers.

The Council desires to place our situation and these issues squarely before you. The society cannot stand still. It must progress or it must retrograde. It can suspend the Journal and it can cease defending its members in negligence suits. It would then revert to its former status as a purely scientific society publishing an annual volume of transactions, with a limited office force and a part time secretary, all expenses being met by a small annual assessment. It can continue the Journal improving and enlarging it as its revenues permit. It can maintain its present legal department and associated staff, guaranteeing adequate medical defense and indemnity on an annual premium basis through commercial companies apart from the regular annual dues of the society.

If it be decided that we must maintain our position, and meet the ever-increasing demands upon us, then organization must be effected on lines already laid down. The question is before you, the decision is yours. Let us hope it will be wisely made.

REPORT OF COMMITTEE ON IDEAL FEE SCHEDULE

(Committee: Emmet Rixford, chairman; F. F. Gundrum, P. E. White)

A committee, appointed by the president to study the question of a fee bill for the California State Medical Society and to make recommendations to the society at this meeting, understands its function to be not so much to discuss the virtues of professional fee bills in general as to investigate the advisability of the State Society adopting a fee bill and the practicability of its enforcement, if adopted. However, of necessity, the question involves an understanding of just what a fee bill is supposed to be and to do. As to the virtues of a fee bill, one can only express doubts as to whether there is much virtue in anything over which men squabble so much as professional men do over fee bills.

At the outset, the committee rejects as unworthy the reason for a fee bill sometimes urged and more often tacitly understood, that by it charges for professional services can be boosted to the advantage of the doctor and to the discomfiture of the opposing lawyer. The only honorable use for a fee bill, in our opinion, in medical and surgical practice is to serve as a guide, yet a completely elastic and kindly guide, in making professional charges, to the end that the dignity of the medical profession may be maintained by means of formulating in a broad sense the collective opinion of the profession as to what is right and just in the matter of professional charges.

Such a fee bill may have a field of usefulness in courts of law as expressing the consensus of medical opinion in a community, but it is not competent as evidence unless certified to by a competent witness such as the secretary of the medical society. It is apt to be discounted before the jury as having been designed for the practical purpose of boosting prices, thereby giving semblance of strength to the ideas of the existence of a medical trust which have been so diligently promulgated by the hangers-on at the fringe of the skirts of the medical profession.

Opinions may differ, therefore, as to the value of a fee schedule in court, and many would hold that there is greater force in personal testimony by competent witnesses of standing in the community as to the value of any particular professional service. Moreover, in attempting to work out the basic detail of a fee bill, it is necessary to take into account a great many considerations. On the one hand, such as the state of prosperity of the community as a whole; the income of the average individual of the community, and his ability to pay. On the other hand, the ever-increasing cost of medical education, the cost of living, the cost of everything, including rentals. Now, most of these things are not fixed, and, as has been witnessed in the last ten years, are subject to the widest variation; therefore, a fee bill, to be practical, must be sufficiently elastic to accommodate itself to varying conditions in the individual community in which it is applied, and also because of

the differences in conditions among different communities.

In some sense it is humiliating, but it is unavoidable, to admit that the law of supply and demand as well as the quality of the service must largely control charges for professional conduct, just as truly as for charges for any human service or for any commodity. It is important in this connection to recall that the law does not require a physician or surgeon to be an expert or to be the most competent man, even in his community, but that he shall have the qualifications merely of the average practitioner in his community, and this has been time and again interpreted as applying to smaller divisions, districts, or communities rather than to the State as a whole; recognizing the fact that should be here recognized, namely, that the conditions of medical and surgical practice vary through the widest limits in different parts of the State.

For example, in a certain town in California, the population is small but is uniformly well-to-do. There, the local practitioners co-operate, and the fees are large and every one is satisfied; but forty miles away, in another town, the inhabitants are relatively poor and of necessity the professional charges must be small. It would seem, therefore, that the difficulties of establishing a fee bill which shall govern the members of the State Medical Society in their charges, and which, therefore, must be uniform for the entire State, are well nigh insurmountable, for the charges which would be manifestly just in one community might be outrageously unfair in another.

It is competent to observe that our sister profession of the law has no State fee bill. In fact, it has fee bills in only a few of the communities in the State.

The matter of a fee bill became acute in the California State Medical Society in 1911, when the Workmen's Compensation Law went into effect. The difficulties of securing an agreement of a definite policy were so great that the matter was postponed from year to year without definite action being taken, and the insurance companies and the Industrial Accident Commission, without the co-operation of the medical profession, adopted a fee schedule for industrial accident cases. This schedule was subjected to the most virulent criticism, but, after all, has worked out fairly well because of the somewhat liberal interpretation of the arrangement by the Industrial Accident Commission, chiefly under the influence of its medical director. While the compensation is small for the individual items, criticism of the schedule is heard less and less because the bills are paid and there is no expense for collection, and there are no losses because of bad debts. The fear that this schedule might have a disastrous effect in greatly lowering professional fees in general seems not to have been well founded. Not long since the schedule was raised 25 per cent, pretty much all along the line. To this schedule most men who are doing industrial accident work adhere, and yet there are many medical men who are willing to cut even its small fees and accept salaries from physicians,

insurance companies, and other laymen who are able to control a considerable amount of such work. If men will cut such a schedule of fees, there would appear to be no means of controlling their actions in cutting fees under a schedule that the State society might adopt.

Therefore it is the sense of the committee that the State society do not embark in the enterprise of establishing a fee bill; that in our opinion it is rather the function of the component societies to adopt and enforce fee bills suitable to the conditions of their individual communities, if in the judgment of the local profession in such communities there is adequate need for a fee bill.

We would conclude with the words of one of the members of the society, whom we consulted in the matter, that "a profession has no price, and it is vital that an artist be permitted to dispose of the products of his genius in any way that he may please."

AUDITOR'S REPORT OF ACCOUNTS OF COMMITTEE OF ARRANGEMENTS

Dr. W. E. Musgrave, Chairman Committee of Arrangements, American Medical Association Convention, 1923.

Dear Sir: Consequent to your request, we have audited the accounts concerned with the financial transactions incidental to the 1923 convention of your association. We thereupon present the following statement of cash receipts and disbursements, which we certify to be correctly prepared from the accounts as shown by the books. Vouchers properly approved have been examined in support of all disbursements. All information requested has been satisfactorily received. We are, dear sir,

Faithfully yours,

LESTER HERRICK AND HERRICK.

AMERICAN MEDICAL ASSOCIATION CONVENTION 1923

SAN FRANCISCO, CALIFORNIA

Statement of Cash Receipts and Disbursements December 12, 1922, to July 31, 1923

Cash Receipts.....	\$24,977.15
General contributions.....	\$23,039.00
American Medical Association of Chicago	1,865.65
Sale of furniture.....	70.00
Sale of "Medical California".....	2.50
Cash Disbursements.....	24,943.27
"Medical California"	\$9,894.30
Entertainment (President's reception, dinners, tours, etc.)	6,089.15
Printing, advertising, circulars, programs, postage	2,613.67
Office salaries	2,188.00
Auditorium expenses	1,675.65
Telephone and telegraph.....	618.20
Office rent	600.00
Furniture	529.00
Badges	400.00
General supplies and expense.....	335.30
Cash on hand August 1, 1923.....	\$33.88

REPORT OF THE COMMITTEE ON INDUSTRIAL ACCIDENT INSURANCE

(Committee: James H. Parkinson, chairman;
Gayle Mosely and John H. Graves)

The committee in its report to the Council for 1922 recommended that the panel be enlarged and that an adjustment bureau be created. At the meeting of the Council on May 17, 1922, it was decided to continue the committee for the purpose of giving effect to these recommendations.

At the meeting of the Publicity Bureau on June 15, 1922, George W. Goodale presented a plan looking to the creation of a bureau or department by the society for the purpose of handling industrial insurance business in connection with its members. This plan, Goodale stated, was predicated upon the adoption of a fee schedule which he then had in preparation. This fee schedule included two distinctive features:

1. A carefully itemized table of fees covering, as nearly as possible, all types of cases and virtually embodying the flat fee as suggested by John H. Graves of the committee;

2. The classification of all physicians, who might do industrial work, into three divisions with a different scale of fees for each division.

The Publicity Bureau directed that a special committee be appointed consisting of James H. Parkinson, chairman, George W. Goodale, Lester Newman of the State Compensation Fund, and Howard H. Johnson, the associate secretary. A meeting of this special committee was held on June 22, 1922, at which were present the chairman, Goodale, Newman, and the associate secretary.

The whole question was gone into at length, and it was decided to appoint two sub-committees as follows: Goodale and Newman to prepare the proposed fee schedule; and the chairman and the associate secretary to submit a plan through which a department of insurance might be created.

It was agreed at the outset that this department should be in charge of a trained insurance man of extended experience who, necessarily, would command an adequate salary. It was felt that any other work in this connection could be handled by the office staff. Connection with the membership would be obtained through the secretary or through a member appointed for that purpose. The question of financing the department, either through contributions by industrial surgeons or by some other means apart from the general revenues of the society, was to be determined by the Council.

Goodale and Newman held a number of conferences and much work was done on the new schedule; meanwhile, the plan as outlined had apparently been quite freely discussed by members generally with the development of views that were quite widely at variance.

At the meeting of the Council held in Pasadena, September 8, 1922, the question was quite fully discussed. Goodale, Newman, Mosely, and Shoe-

maker were also present. Goodale presented the proposed schedule in part and a revised "plan of operation." The Council referred the whole matter, as then submitted, to the committee, with instructions to report back to the Council at a special meeting whenever the special fee schedule had been completed. The sum of \$300 was appropriated to print the schedule and "plan of operation," so that both could be submitted to the Council in advance of the meeting.

At a meeting of the Council held January 6, 1923, Packard Thurber, secretary of the Industrial Medicine and Surgery Section of the State Society and of the Los Angeles County Medical Association, stated it was requested that no further action be taken by the society, and that the creation of an insurance department was not desired. In the discussion that ensued it was the sense of the Council that final action would not be taken on the proposed plan and fee schedule until the Industrial Accident Section had been given an opportunity to study it.

The general sentiment of the membership in San Francisco, especially of those interested in industrial surgery, seemed to be of the same character.

Progress on the fee schedule, which at first had been steady and satisfactory, was later delayed by the continued ill health of Goodale, who frankly stated early in May that, while he greatly regretted his inability to fulfill his promise, his physical condition would not permit him to complete the schedule in time for the annual meeting. In view of the foregoing, the committee has decided to submit this as its final report with the following comments:

It believes the business of industrial medicine and surgery has reached the stage in its evolution when the creation of a department as already outlined would be satisfactory to the carriers. If functioning satisfactorily, such a department would have expedited and improved reporting, procured the adjustment of bills and hastened settlements and decreased the carriers' cost by eliminating a great deal of correspondence. It would have removed much of the friction arising between carriers and physicians; replacing trouble and misunderstanding by helpful co-operation. Lastly and most important, it would have greatly improved the service to the injured employee. All this was possible by providing a contact with the profession that most of the companies now lack.

The committee does not attempt to indicate the reasons nor to analyze the sentiments that prompted antagonism to the proposed plan. It believes very definitely that the profession has again failed to realize the value of organization and the results that it will accomplish. It has refused to grasp an opportunity that promised distinct advantages, material and financial. It is unlikely that this opportunity will again be available. The profession's failure will be translated into action in another direction. The business of industrial surgery will be concentrated in the hands of fewer men and at a lower remuneration, possibly on a salary basis. Should this result, as seems

likely, in a deteriorated service, a reaction may ensue. If it is realized by the carrier, the employer, and the injured workman that the inevitable result of this is increased cost and inferior service to the detriment of all concerned, then the occasion may arise for some plan similar to that which has been proposed as most likely to attain ideal results.

MEDICAL DEFENSE AND INDEMNITY DEFENSE

Important Resolutions Adopted by the House of Delegates regarding medical defense and the indemnity defense fund.

Medical Defense Ends June 30, 1924

The House of Delegates on June 30, 1923, passed the following resolution:

"Whereas, the House of Delegates at its regular annual meeting held at Yosemite, May 17, 1922, unanimously adopted a resolution directing the Council to make medical defense optional, the cost thereof to be met by separate assessment on the members desiring it; now, therefore be it

"Resolved, That medical defense be terminated as of June 30, 1924, and that the Council is hereby authorized to effect, if possible, a blanket defense policy arrangement with one or more insurance companies to be made optional for such members as desire such protection, and thereby retain for such members the services of the society's legal staff; or, if such blanket policy plan is not found practicable, to arrange and submit to the membership a plan optional to each member to retain the society's legal staff."

This resolution is of direct personal interest to every member and is in line with the action taken at the annual meeting in May, 1922, directing the Council to make medical defense optional, and imposing the cost of maintaining it only on the members desiring this service. The resolution terminates the defense one year hence. This means a definite reduction of dues as soon as the new plan is in full effect. It will also give each member his option of having medical defense if he desires it (as part of the blanket policy plan) and wishes to pay a separate assessment for it. Meanwhile the Council is negotiating with various insurance carriers to arrange if possible a blanket defense policy optional to the member at less than the regular premium rates.

Indemnity Defense Fund to Be Discontinued

The desire for lower dues and for an optional medical defense plan, expressed in definite resolutions at the last two annual meetings, necessitated the termination of the Indemnity Defense Fund. Realizing the sentiment for optional medical defense, the Council during the past year conducted a canvass of the members of the Indemnity Defense Fund in an effort to incorporate it, but found that the plan was not acceptable to a sufficient number of members to make the idea practicable.

These facts and all the activities of the society with the costs involved, were presented in detail to the House of Delegates at its recent meeting, and resulted in the passage of the following resolution providing for the termination of the Indemnity Defense Fund:

"Whereas, The Council, under instructions from the House of Delegates to present a plan to make medical defense optional, has conducted a canvass of the members of the Indemnity Defense Fund, being those members most interested in the subject of physicians' defense, in an effort to incorporate such Indemnity Defense Fund, but finds that such incorporation plan is not acceptable to a sufficient number of members to warrant further

effort, and that it is not possible because of lack of support; now, therefore be it

"Resolved, That the Indemnity Defense Fund be discontinued as a society undertaking at such time and upon such notice as the Council shall deem necessary for the best protection of its members, and the Council is hereby directed to accept no further memberships in the Indemnity Defense Fund."

The Council expects to submit a blanket policy form of coverage to interested members, and particularly members of the Indemnity Defense Fund, at an early date.

The effect of the two resolutions on each individual member can be summarized as follows: As to all members, any malpractice suit or threatened suit arising out of professional services rendered after June 30, 1924, will not be defended by the society. As to members of the Indemnity Defense Fund, notice by letter will be given of the termination of the coverage by the fund, in ample time to allow the member, if he desires, to secure the blanket policy coverage, if satisfactory arrangement therefor is made, or if not, to secure ordinary commercial coverage. On termination of the fund coverage, the fund will be distributed pro rata among its members after disposal of pending claims and cases.

An Analysis of Some Cases of Tubercles in the Tonsils—Of 400 consecutive tonsillectomies analyzed by W. V. Mullin, Colorado Springs, Colo. (Journal A. M. A., April 28, 1923), in seventeen cases, or 4.25 per cent, tuberculosis of the faucial or pharyngeal tonsils, in various combinations, was present. A careful review of the histories of the seventeen cases shows no characteristics, such as size, color or appearance, which might have served to identify the tonsils as tuberculosis before they reached the microscope. Open pulmonary tuberculosis accounts for practically all of the secondary tuberculosis infections of the tonsils. Sixty per cent of the positive cases in this series gave a history of pulmonary tuberculosis. That these tonsillar lesions are secondary to the pulmonary disease is clearly indicated by the fact that in 70 per cent of them, both tonsils were involved. Twenty-five persons were known to have pulmonary tuberculosis, and of these, ten, or 40 per cent, were found to have tubercles in the tonsils. Of three cases of definite tuberculous cervical adenitis, two presented tuberculous tonsils or adenoids. Five of our seventeen positive cases, approximately 30 per cent, gave no history or evidence of tuberculosis elsewhere. The total number of adenoids sectioned was small (167 cases) in comparison with the number of tonsils (390 cases). The percentage found to be tuberculous was: adenoids, 1.8 per cent; tonsils, 3.6 per cent.

The Electrocoagulation Method of Treating Diseased Tonsils—Frank J. Novak, Jr., Chicago (Journal A. M. A., June 23, 1923), employed this method in 100 cases. Without exception, the patients had a stormy experience beginning a few hours after operation. Pain was uncontrollable save by liberal doses of morphin. There was extreme difficulty in swallowing, much greater than after tonsillectomy. The plate was extremely edematous, and speech was impossible. The intensity of this reaction persisted through the sixth day. Whatever logical basis electrocoagulation of diseased tonsils may have, from a theoretical standpoint, is far overshadowed by the unsatisfactory results in actual practice. Novak believes that the method is entirely inadequate, inaccurate and unsatisfactory, and cannot in any manner compete with accepted present-day methods of tonsillectomy.

AMERICAN MEDICAL ASSOCIATION SESSION, SAN FRANCISCO, 1923.

(A series of brief reports about the convention by members of the California Committee.)

By A. C. REED, Chairman of the Committee

They came early. The first day's registration was the largest in the history of the A. M. A. The total registration was 3765, as compared with the highest registration of 5553 at Chicago in 1918, and a total registration of 2307 in San Francisco in 1915. They stayed late. The hospitality of the California Association did not cease with the close of the convention. It was extended in every county of the State during the ensuing week and was signalized by set post-convention clinics in the larger cities of the State which were fully up to the standard of the convention clinics in San Francisco and Oakland. The enthusiasm and interest aroused by the inauguration of the first California president of the A. M. A., Ray Lyman Wilbur, reached its height on the occasion of his inaugural address before an audience of 7000 persons who packed Dreamland rink on the opening night. And this enthusiasm lasted through the entire convention and was carried back to the physicians of the entire country.

The papers presented will be published in due course. No comment on them is needed now. Certain features of the convention, however, were unique and call for special comment. Every guest felt thoroughly that his hosts were not the physicians of San Francisco but the united medical profession of California. Never before has a State medical society assumed such a role and its success is the best evidence that the idea, while new, is worthwhile. The convention zone included the bay district and in the week following the entire State was visited and every county society undertook its measure of proffered hospitality. Then again a distinct keynote was struck by President Wilbur in his challenge to maintain and keep undimmed the ancient faith of the physician, self-forgetful personal service to the individual and the public. In confident assurance, let the medical profession stand firmly on its achievements and pursue its goal. Let it rightfully assume its leadership in the progress of society, socially, economically, culturally, and healthfully.

The remarkable fitness of the Civic Auditorium for housing such a many-sided convention was abundantly demonstrated. Except for the opening session every feature of the convention, scientific sections, popular theater of lectures and movies, exhibits, and innumerable minor interests found adequate space and facilities in this huge building. The main floor was covered with a commercial and scientific exhibit which in number of exhibits, excellence, and expense has never been exceeded at any medical convention.

A particular feature of the convention was the provision of a program of outdoor sports and entertainment which was fully embraced by the visitors. Thus far not one complaint has been received of lack of entertainment or of imperfect arrangements. Every feature of the great convention moved along smoothly as a well-oiled machine. Every section was provided for adequately, every need foreseen. There was neither hitch nor accident to mar the efficiency and comfort of the visitors.

Highlights of the Convention

The Diagnostic Clinics—For the first time in the history of the A. M. A. set clinics formed a valuable and integral part of the program presented. These clinics were organized for the two days preceding the convention in some twenty hospitals. Each clinic was conducted by visiting and local physicians alternating. They were restricted closely to diagnostic presentations. They drew a large attendance and proved of such value that their continuance is assured in future years.

Publicity—Seldom has a medical convention been so accurately and extensively reported in the newspaper press as this one. It afforded an unusual opportunity for taking the public into the confidence of the medical profession. And this opportunity was excellently improved. The publicity was made possible primarily by organization and the cordial co-operation of the San Francisco newspapers. It was most valuable for the cause of scientific medicine in obtaining for itself a sympathetic hearing from the public. It was also, and will continue to be, most beneficial to the public in giving a clearer idea of the aims and achievements of medicine.

Excellence of Local Arrangements—For the first time the entire A. M. A. was enabled to hold all of its various department committee and section meetings under one roof with no crowding or confusion and with the great inspiration and time saving incidental to effective centralization. The huge floor of the auditorium which housed the scientific and commercial exhibits gave abundant space for a general lounge and headquarters. This could be visited between section meetings without loss of time and the ability to meet friends and strangers was thereby greatly increased. While the city of San Francisco united in offering its hospitality to the A. M. A., it was noteworthy and unique that the entire bay district shared the responsibility of local entertainment and the entire California Medical Association acted as host to the convention.

Post-Convention Clinics—While the convention clinics were limited to the hospitals of the bay district, similar clinics were organized and conducted with equal success in the cities and larger towns of California outside of the San Francisco district on the first two days of the following week. These post-convention diagnostic clinics served to increase the friends of the convention and to make the hospitality of the California Medical Association very real to the visitors from outside the State. The co-operation of the medical departments of the various Federal Government services contributed materially to the success of the sessions.

The President's Reception—Seldom has Nob Hill seen a more brilliant social galaxy than thronged the huge balconies of the Fairmount hotel on the evening of the reception to the incoming President, Wilbur. Over six thousand persons joined to pay honor to the first Western president of the A. M. A.

Emphasis on Preventive Medicine—In the various sections and general meetings emphasis was placed on the importance of preservation of health as a means toward disease prevention. This was stressed both from the standpoint of the individual and from the collective standpoint of society. The excellent newspaper health service being maintained by California physicians attracted much attention and favorable comment. This has proved an effective way of popular education in matters of health.

By ROBERT POLLOCK, San Diego

As the American Medical Association convention draws to its close and the thousands of physicians, surgeons, professors, and specialist of all kinds scatter to their homes in every part of the land, or proceed to spend a well-earned vacation enjoying the scenic beauties of the West, it is pertinent to make certain inquiries as to the results of such a gathering.

Does the expenditure of millions of dollars on the part of those attending the sessions justify itself, in their opinion, and what are the benefits accruing to the public at large in the city in which the convention is held, in the communities to which the delegates return and throughout the length and breadth of the country to which the strong arms

of the press carry liberal messages of the sayings and doings of the week?

Press Praised

Too much cannot be said in praise of the manner in which the newspapers of San Francisco have caught the spirit of the convention and reflected it in their pages. The silent, unobtrusive work of the small army of reporters who have covered the various sections, picking out their salient features for the benefit of their readers, was to the onlooker a marvel of organized efficiency.

It may well be asked since service is the keynote of the convention which has attracted so many thousands of physicians and induced them to leave their practices, is it fair to withdraw at one time so many of the workers from those in need of their services? The answer to this question only emphasizes the magnitude of organized medicine when we say that less than five per cent of its numerical strength is represented here this week, and the better organized the profession has become the easier is it for its members to take over on short notice the work of one another; so that the absence from the home of these delegates fails to disturb, to any appreciable extent, the service program whence they came.

Better Service

This program on their return is promptly given an impetus to better service, which more than justifies their absence. The fruit of the convention is expressed by them in not only increased knowledge, but the inspiration to do better work, both of which newly acquired assets are disseminated throughout the local medical society and the local community generally.

It is well recognized by those who have made a careful survey of the subject that those communities enjoy a higher grade of service wherein its medical profession shares the advantages of a medical society, in which to exchange views on the problems common to the locality, a medical library with which to keep abreast of the newer knowledge and a clinic or hospital to furnish the workshop wherein the physician can best express himself.

So well is it recognized that the physician, no matter how well educated, is apt to lag behind when compelled to work, isolated from his fellows and devoid of these advantages, that it is becoming more and more difficult to induce well-trained young men to settle in the rural districts. In fact, this is one of the large medical problems of the day. All honor to the country physician who, without these advantages, can make of himself the strong, capable, self-reliant exponent of medicine that so many of them have become.

Record Circulated

Supplementing the educational work done by those who attend the meetings of the American Medical Association, that body publishes a full account of all its transactions, including every paper read before its sections, with a complete report of all the discussion of them. This goes back to its membership everywhere in the pages of its weekly journal, which is today the most comprehensive weekly publication on the medical sciences in the civilized world.

Other Results

Besides carrying the transactions of the annual scientific meeting, it also prints letters from and answers questions by its members, carries several pages of well digested editorial matter, written by experts and reflecting the proven knowledge on the most advanced thought of the day. Its abstracting, translating, and interpreting of much of the literature published in other journals, domestic and foreign, carries to the isolated reader some of the advantages of a medical library.

Thus the educative value of the annual meeting teaches its members everywhere and lasts through-

out the year, because it takes the greater part of the year to publish all the transactions in the journal.

It is not difficult to see how this machine for the dissemination of useful medical knowledge is of value to the public everywhere, because it is upon this public that the physician finally expresses the fruits of the convention as they have touched him.

New Sentiment

That there is an aroused public sentiment for civic betterment along the lines of public health, hygienic measures, and means for the prevention of epidemics in the immediate community, wherein such a convention is held, has frequently been commented upon, and certainly San Francisco is entitled in generous measure to all of these rewards for the splendid manner in which she has greeted and cared for her visitors.

Also the city and the State of California are to be congratulated on having in the League for the Conservation of the Public Health a medium through which the scientific truths brought forth from the convention are translated into terms of its practical application to the every day needs of the public. Such matter, written by experts in their individual lines, appears regularly in the pages of the leading newspapers. Educational programs of this kind go a long way to conserving the health of the people, which is the prime function of organized medicine.

By HARRY LESLIE LANGNECKER

The San Francisco meeting has been a tremendous success. The Pacific Coast has been treated to medical demonstrations and ideas beneficial not only to the medical profession but also to other citizens of this community.

The convention clinics ushered in by the State Association were an outstanding feature of this gathering; stimulating members of our local profession and acquainting the visitors with our hospital facilities. It was noticeable that physicians of national prominence in special fields were selected to give these clinics. The attendance and interest shown were ample evidence of the wise arrangement, and the effect will be far reaching and beneficial, perhaps more so than the sectional meetings or the excellent scientific exhibits.

At the section meetings, papers were presented on the live, present-day problems confronting the medical profession. In the orthopedic section it was noted that the discussions were confined to subjects of greatest concern, not only to the orthopedist but also those confronting the general practitioner.

In a word, the educational influence produced by this meeting of the American Medical Association of San Francisco has been well worth while.

By CLEMENT H. ARNOLD, San Francisco

Obiter dicto in re Seventy-fourth A. M. A. Convention.

Several hundred years ago, Terence expressed his creed by the words, "Nihil homini alienum est puto mihi" (nothing which appertains to humanity is foreign to my purpose). It would be difficult, indeed, to conceive of a succinct quotation which would convey more nearly and more cogently the spirit which dominated the seventy-fourth annual convention of the American Medical Association than the above.

From the first meeting of the Council of the California Medical Association to the last section Assembly on Public Health of the A. M. A., this note was the dominant one. A mere casual survey of the multitudinous exhibits in the vast auditorium of the Civic Center, the moving pictures and the publications forced in upon everyone the

indisputable fact that the science of medicine and its allied activities had begun a hegira from out the realm of mere research and scientific experimentation to the broader fields of human life and activity and that its beneficent tenderings were being vouchsafed for the betterment of every phase of human life and endeavor.

Within the more intimate intellectual purlieus, so to speak, of the society was plainly evident the spirit of what might be termed, reconstructive unrest. The realization that the profession had its feet upon the threshold of a new era which was about to initiate a more complete and more perfect period of service.

Ray Lyman Wilbur in his inaugural address expressed forcibly what has been long neglected or disregarded that the sins of medicine were those of omission, not of commission, and that only a careful critical analysis from within could be of any real lasting benefit for the improvement of the profession.

The meetings in regard to narcotics and their attendant evils were to the point, well taken and some constructive suggestions offered. The meetings in regard to the question of alcohol were to my mind without a single redeeming feature. The speakers missing the point completely that at the present state of so-called medical legislation any endeavor to alter existing laws are abortive and impractical, especially the suggestions that alcoholic beverages be delivered in undetermined quantities to the physician; and one of the federal directors replied with well-merited sarcasm when he referred to the number of medical men who had renewed their hundred-blank books every three months since the passage of the law. This last was the only discordant note in the whole convention, and it is to be hoped that the saner outlook of the leaders of the society will be able to dominate the situation in the end.

Again and again, mention was made of the "good old family doctor," and his attitude of physician, priest, and counselor to his patients. It seems germane to reflect here a bit upon this statement:

From the earliest days when mankind became gregarious, from the time when mutual help was at all recognized as the sine qua non for the preservation of the species, the priest, medicine man, or what-you-will ministered to the ills of the flesh as well as those of the soul. There is no more powerful agency for the guidance and control of man in the universe than such a combination. In the middle ages, when the priesthood were the only real potent agency controlling an unlettered, turbulent population, this was made use of to its fullest extent.

As the "world rolled on, and the hot lands heaved amain," the increasing multifariousness of life inexorably predicated a change along lines we now call specialization. De facto and de jure, the priesthood and the medical profession became more and more distinct until they finally were working along lines which, though they appeared at times antithetical, were really parallel.

This condition lasted, as such, practically unchanged in its larger aspects until about fifty years ago. There had come into existence the old family physician who was generally competent to treat disease as far as medical science then permitted, but who above all possessed a rare tenderness of outlook, a finesse of tact and a warmth of intimacy which separated him only very slightly from the patient's spiritual adviser.

With almost comet-like suddenness there flashed into the crepuscular sky of scientific medicine the large number of discoveries which have made the medical sciences what they are today. Immediately the need for longer study, more intensive study

and the addition of innumerable facts to the existing storehouse of knowledge brought into being specialization.

Specialization predicated less time to patients and more time to their bodies and their particular diseases. The movement once initiated progresses, *pari passu*, with the other advances in human activities. Gradually, to a certain extent the patient's personality was lost sight of by some physicians. It was forgotten that "back of every set of symptoms lies a soul," and some who came to their physicians with the unuttered but nevertheless painfully present Macbethian plaint, "Canst thou not minister to a mind diseased, Pluck from the memory a rooted sorrow, Raze out the written troubles of the brain, And with some sweet oblivious antidote Cleanse the stuff'd bosom of that perilous stuff That weighs upon the heart?"

were met by one who was by training and, sometimes, too, by inclination, totally unfit to handle such a situation.

It is not difficult, then, to see whence came the numbers and the strength of the cults which have arisen and which in one way or another minister to the patient's unsatisfied and untutored emotionalism. The medical profession, then, like the medieval guilds, while open to suggestions from without, should govern themselves from within.

The fires of social assay are even now raging, many of our dearest edifices have been consumed or scorched, it is in the hands of the profession itself whether it shall stand or fall with the others. There is no greater agency for progress than medicine, but it must be honest medicine, searching, testing, proving with its ideal the inscription upon Trudeau's statue at Saranac: "Guerir quelquefois, Soulager Souvent, Consoler toujours" (curing sometimes, relieving often, consoling always). If some of our institutions of science have crumbled in the light of present day progress we may, as Tennyson has said, "rise upon the stepping stones of our dead selves to better things," for the betterment of mankind, the glory of our profession and the honor of our illustrious forbears who by their perennial labor and self-sacrifice made life the possibility it is today.

Age Incidence of Gastric Cancer—Occupation, family traits, habits, mode of living, onset of complaint; in short, that fine network of circumstance with which cancer is usually associated, Meyer Golob, New York (Journal A. M. A., May 5, 1923), asserts, has a greater significance than age. When the patient is of an age not within what might be termed the frequency period—the so-called "cancer age"—physicians have manifested a very human failing by their reluctance to ascribe the patient's condition to so horrible a disease as cancer, and naturally cast about for a milder malady. Symptoms warranting a diagnosis of chronic gastritis, particularly in patients who claimed the enjoyment of good health prior to the onset, favor a suspicion of cancer. When a diagnosis of carcinoma ventriculi is established in a case in which there is no palpable mass, it is not safe to assume from the absence of such a mass that the disease is in an early stage, for a large growth that has well metastasized may exist without producing a palpable tumor. It is the prediagnostic phase of cancer that should be detected—a phase often disregarded because of the absence of impressive signs or symptoms, as when neither the cardiac nor the pyloric orifice is involved, when there is no hesitation in food entrance and no obstruction to food exit. A suggestive symptomatology, no matter how faint the indication, calls for a searching inquiry. The easier it is to diagnose a cancer, the harder it is to operate on it.

THE PRESIDENT-ELECT

The election of Dr. William Allen Pusey as president-elect of the American Medical Association is a recognition not only of leadership in a specialty of medicine, but also of personal service to the American Medical Association and to medical science. Dr. Pusey was born in Elizabethtown, Hardin county, Ky., December 1, 1865, son of Dr. Robert B. and Belle Brown Pusey. It is interesting to know that in 1922 Dr. Pusey presented a tablet to his native county as a memorial to Lincoln's foster mother, for Abraham Lincoln was born on a farm in Hardin county. The great-grandfather of Dr. Pusey, William Brown, mapped the road from the Cumberland Gap into Kentucky. Dr. Pusey received the A. B. degree from Vanderbilt university in 1885, the A. M. in 1886 and the M. D. from the Medical College of New York university in 1888. The following year he began practice in Chicago. From 1894 to 1915 he was professor of dermatology in the University of Illinois School of Medicine and since that time has been emeritus professor. He has been dermatologist at St. Luke's and Augustana hospitals, and was president of the American Dermatological Association in 1910 and of the Chicago Medical Society, 1918-1919. During the war he rendered conspicuous service to the Government as chairman of the committee on venereal diseases in the surgeon general's office, outlining the plan of attack on these diseases and aiding in the preparation of the "Manual of Treatment of Venereal Disease," which was issued to every physician in the United States. He is author of "The Roentgen Rays in Therapeutics and Diagnosis," of a textbook, "The Principles and Practice of Dermatology," which has passed through several editions, of "Syphilis as a Modern Problem" and of numerous periodical articles concerning diseases within his specialty. During 1922 he published "The Wilderness Road to Kentucky," in which he described the mapping of the road and its present condition as found on a personal trip which he made throughout its length. In 1910 he first described the use of solidified carbon dioxide, so-called "carbon dioxid snow," in the treatment of diseases of the skin. To the American Medical Association Dr. Pusey has rendered long, continued service. He was chairman of the section on diseases of the skin in 1909. From 1911 to 1922 he was treasurer of the Association. Since its foundation in 1920 he has been an editor of the Archives of Dermatology and Syphilology, published by the association. In electing him to leadership the American Medical Association has recognized a man known for scientific ability in his chosen field, for executive ability as demonstrated by his work on important committees and councils, and for scholarship as exemplified by contributions to both medical and lay literature. It may confidently look to him to continue the promotion of the high ideals for which the association stands.—Journal A. M. A., July 7, 1923.

SAN FRANCISCO SESSION

The annual session of the American Medical Association in 1923 at San Francisco was a notable demonstration of the advance which medical science has made in the western part of the United States in the brief period since the Association met in the same place eight years ago. The registration (3765) exceeded by almost 1500 the registration at the 1915 meeting. In view of the distances traveled by those attending the convention, including even those from Western States, this large registration is a remarkable testimony to the work of the association on the Pacific Coast.

A conspicuous feature of the San Francisco session is the fact that not only the exhibits and the meeting of the House of Delegates were held in the Civic Auditorium, but also the meetings of all of the sections. This enabled the fellows to go

rapidly from one meeting to another and permitted selection of the various papers in the various sections which were of particular interest to the individual physicians. The scientific program was noteworthy for the advanced character of the subjects discussed. None of the newer procedures in diagnosis and treatment seems to have been overlooked. Of particular interest were symposiums on diet, on the mental health of the child and on preventive medicine, which attracted large numbers. The unusual feature of this meeting was the extensive publicity given to the work of the association, not only by the press of San Francisco, but also by newspapers throughout the country. All the local papers assigned special staffs to cover the meeting and devoted from two to three pages each day to reports of the session. Physicians of California expressed the belief that the information thus given to the public through the lay press would be of great service in combating the advertising of the nonmedical cults, which has been particularly obnoxious in that State.

The main hall of the Civic Auditorium was occupied by the scientific and commercial exhibits. In the scientific exhibit special arrangements had been made to demonstrate particularly problems associated with the diagnosis and prevention of disease, and large numbers of persons constantly availed themselves of the opportunity to receive first-hand demonstrations of newer procedures in these fields. The motion picture theater, a part of the scientific exhibit, was likewise devoted primarily to diagnosis and was constantly attended by from 300 to 500 persons. In view of the distance to be traveled, the extent and scope of the commercial exhibits was a demonstration of the interest taken in the annual session by the manufacturers of drugs and foods, by the makers of apparatus and by medical publishers. Every foot of available space was occupied, and exhibitors expressed themselves as more than satisfied with the attention given to the displays.

In a special resolution, the House of Delegates of the Association tendered its thanks to the local committee of arrangements for the excellence of preparation and the thorough efficiency in its conduct of the meeting. As has been said, the main meeting hall is especially adapted to sessions of the association. The opening meeting was held in an auditorium seating more than 6000 persons, and every available space was occupied. The president's reception was held in the three ballrooms of the Fairmont hotel and was an exceptionally well-arranged, beautiful, and entertaining feature. Women visitors were provided with drives about the beautiful environs of the city, and a concluding event was the reception at Stanford university by President and Mrs. Ray Lyman Wilbur.

The climate of California justified its well-known reputation for evenness and salubrity. The weather during the entire meeting was clear and the range of temperature varied but a few degrees.

The sessions of the House of Delegates were fully and closely attended. As is shown by the minutes printed last week and continuing through the issues of this and next week, many problems of importance to the association and to the public welfare received careful consideration. Attention is directed particularly to the actions taken relative to amendments to the constitution and by-laws of the association.

The description would not be complete without mention of two unusual features. Through the local committee of arrangements, plans were made for clinics before and after the session. These clinics, held throughout the entire Pacific Coast and western States, carry the scientific work of the association to many who were unable to register at the meeting. In order to convey an adequate view of medical California an extensive volume was prepared describing the work of the annual session and the medical features of every county in the State.—Journal A. M. A., July 7, 1923.

LETTER OF APPRECIATION FROM MEDICAL WOMEN'S NATIONAL ASSOCIATION

The following letter has been received by the chairman of the committee of arrangements of the American Medical Association convention from the president of the Medical Women's National Association:

"In accordance with the resolution of the executive committee of the Medical Women's National Association, we wish to express to you and to the members of your committee and to your staff our deep appreciation of the cordial co-operation given to us in the arrangements of our annual meeting, in securing publicity, in providing a hall, and in all ways assisting in making our gatherings a success. Accept our appreciation and sincere thanks."

ANNUAL HOSPITAL CONFERENCE, SAN FRANCISCO

October 18, 19, 20, 1923

The program of the third annual conference of the hospitals of California promises to be more interesting and cover more practical problems than even the splendid program of the Pasadena conference of 1922.

Physicians, dentists, nurses, medical social workers, architects, public health nurses, physiotherapists, members of hospital boards, supervisors, and other persons interested in hospital betterment work are sending the Hospital Betterment Service Bureau of the League for the Conservation of Public Health many constructive suggestions on subjects that should be discussed at the coming conference. The hospital betterment work of the league in California has been commended by national authorities as a model for other States to follow. At the recent national convention of the American Medical Association the scientific exhibit of the League for the Conservation of Public Health was awarded the certificate of merit for hospital betterment and better health service.

Since the Pasadena hospital conference was held last year a number of problems have developed that require common counsel and the best talent and information available for their solution.

The plan pursued so effectively in previous conventions will be followed at the October conference. Each hospital is entitled to send one official delegate representing its directorate, one representing the staff, and one representing the administration.

Program Suggestions Wanted

Program suggestions will be welcomed and should be addressed to Dr. W. E. Musgrave, chairman Hospital Betterment Service Bureau, League for the Conservation of Public Health, Balboa building, San Francisco.

RESOLUTION OF APPRECIATION

The following resolution was adopted by a rising vote of the House of Delegates of the American Medical Association at its recent meeting held in San Francisco:

"Whereas, The annual session of the American Medical Association in San Francisco has been marked by exceeding hospitality, enthusiastic greeting, and unusual efficiency; and

"Whereas, The local committee of arrangements, under the chairmanship of Dr. William E. Musgrave, has been instrumental in the perfection of arrangements, and in the provision of meeting places and entertainment unexcelled for facility and beauty; and

"Whereas, The press of San Francisco has rendered great service to scientific medicine and to the public by the extensive space and unusual

accuracy accorded to accounts of the session; therefore, be it

"Resolved, By the House of Delegates, that the gratitude and thanks of the association be tendered to all for the success of this session, and that we reaffirm the slogan conferred on the city by a former president that 'San Francisco Knows How.'"

State Universities and Politics—Educators will view with much apprehension the statement that Governor Walton of Oklahoma has ousted several of the regents of the State University of Oklahoma, and also made conditions so uncomfortable that President Stratton D. Brooks, under whose administration the university has made excellent progress for several years, has resigned and accepted the presidency of the University of Missouri—an offer which he had recently rejected because of his deep interest in the University of Oklahoma. President Brooks had accepted the presidency of this institution, it is stated, under the definite understanding that it would be exempt from political influences, and without such freedom no state university can make satisfactory advancement. When it is subject to upheavals with each change of administration there is bound to be a constant unrest in all departments, and instead of having a constant and steady growth from the educational point of view, the institution from necessity becomes a political machine in which the merits of its faculty will depend more on their work and influence as politicians than as educators. It is difficult to secure and retain competent and self-respecting teachers under such circumstances. So far, little protest has been noted from the people of Oklahoma against the governor's action, and perhaps they do not realize the serious position in which their state university is now placed. In Texas, several years ago, when former Governor Ferguson attempted to remove President Vinson and certain regents and teachers of the University of Texas, the result to himself was disastrous. So great was the furor that arose from educators throughout the state that he was promptly impeached by the legislature and suspended from office. So prompt and decisive was the reaction that any future governor of Texas will indeed be brave who makes a similar attempt. It is high time that all our state universities should be left free to develop as educational institutions, unhampered by interference from politicians.—*Jour. A. M. A.*, June 9, 1923.

Skin Preparation in Hypodermic Needle Punctures—C. E. Tennant, Denver (*Journal A. M. A.*, April 14, 1923), describes the use of alcohol for disinfection of the skin in preparation for the use of the hypodermic needle. First, alcohol for commercial use, and even for hospital administration, is not what it was before the Volstead Act went into effect. Second, alcohol rubbed over the skin causes no discoloration; hence there is no target or landmark apparent to which the point of the needle may be directed in order to come well within the so-called sterilized bacteria-fixed area. Under such conditions, no doubt, it frequently happens that the hypodermic needle is plunged into an altogether unprepared spot. Consequently, although the technic of hypodermic syringe and solution sterilization may be ever so carefully executed, the unexpected happens, since the needle, passing through an unclean area, may carry with it whatever is lodged on the skin. The use of iodine as the agent best adapted to skin preparation has been universally accepted, and why alcohol is permitted, or recognized as equally effective when applied to hypodermoclysis, or the administration of drugs by hypodermic needle, Tennant says, is beyond comprehension, especially since the commercial forms of alcohol are generally used. Tennant reports a case of gas bacillus infection at the site of hypodermic puncture.

COUNTY NEWS

[As many of the County Medical Societies are not holding meetings during the summer months and the county officers are on their vacations, few reports have been sent the Journal, but it is hoped that, beginning with the fall months, we will be able to give our readers interesting news each month from every county in the State.—Editor.]

SAN DIEGO COUNTY

San Diego County Medical Society (reported by Robert Pollock)—Over forty members of the San Diego County Medical Society attended the sessions of the A. M. A. at San Francisco, many of these motoring through the Yosemite or enjoying other brief outings on the way back. Many fellows of the A. M. A. visited San Diego during the post-convention clinics of July 2 and 3. Joseph Colt Bloodgood, during his stay in San Diego, lived up to his record for intensive work, holding four distinct programs during the twenty-four hours. He addressed a public meeting in the First Congregational church, which auditorium was crowded to the doors; a malignant tumor clinic at the county hospital for the medical profession; an illustrated talk on the malignancy of the mouth before the county dental society and an after-dinner talk before the combined medical and dental societies, previous to his leaving for Los Angeles.

The last meeting of the county society before the summer recess was given over largely to an entertaining lantern talk by H. P. Newman, who described in a very interesting manner his trip to South America under the auspices of the American College of Surgeons. The doctor's description of such interesting cities as Rio Janeiro, Buenos Ayres, and Santiago, going into their medical aspects, was greatly enjoyed by a full house at Science Hall.

On Saturday, July 14, the San Diego Scientific Library makes its bow to the public. Splendidly housed in the beautiful California building in Balboa park, it is given a setting which few infant library movements enjoy. This library links together under one roof the various collections of scientific works held in trust by such organizations as the San Diego Medical Library Association, the San Diego Museum, the Natural History Society of San Diego, Scripps Institution of Biological Research, San Diego Zoological Society and others, and adds one more to the free educational movements that are rapidly making of San Diego the cultural center of the Southwest.

SAN MATEO COUNTY

San Mateo County Medical Society (reported by William Otis Callaway, secretary)—At a meeting of the San Mateo County Medical Society, held May 29, the following officers were elected for the ensuing year: President, W. C. Chidester; vice-president, Allen Benner; secretary-treasurer, William Otis Callaway. The following names were presented and voted upon as new members: Allen Benner, San Mateo; J. W. Hanner, Burlingame; J. M. Blood, Redwood City; H. A. Clattenburg, Redwood City; William Otis Callaway, Burlingame; H. H. Whitney, Burlingame.

Should Be Checked—"Bureaucracy," says Dr. E. H. Ochsner, "will, if not soon checked, sap the very life-blood of this nation. Government control of the medical profession is but one of its manifestations. As medical men who love our profession, and as good citizens who love our country, it is our duty to oppose this tendency with all our might."—From report of Committee on Medical Economics, Ohio State Medical Journal, May, 1923.

MEDICAL ECONOMICS

Why not let our advertisers help you?

The Abbott Laboratories Open Branch in San Francisco—Branch of the Dermatological Research Laboratories of Philadelphia has been established by the Abbott Laboratories at 559 Mission street, San Francisco, S. H. Fetherston, manager. Arsphenamine Neoarsphenamine and Sulpharsphenamine will be carried in stock for immediate delivery to physicians, dealers, druggists, and hospitals.

Preparation of Manuscript Made Easy—The Corona Typewriter Company in the advertising pages of this issue of the Journal gives some rules for the preparation of manuscript which should be followed by all authors and which can be done without difficulty if one owns a Corona—the "personal writing machine." Clip the coupon they provide and send for the folder, "Corona and the Doctor's Desk." They have representatives in all parts of the State, whose addresses can be found in your phone book. The San Francisco office, which has been co-operating with your Journal for some time, is located at 546 Market street.

Classified Advertising—Be sure to read the classified ads on page 46 of each issue of the Journal; they may contain just what you are looking for.

Late Results in the Treatment of Syphilis—H. H. Hazen, Washington, D. C. (Journal A. M. A., June 23, 1923), says there are no satisfactory criteria as to the cure of syphilis. Relapses may occur after a patient has been asymptomatic and had a negative Wassermann reaction for six or seven years. Not all cases of early chancre are cured by modern methods of treatment. The early and intensive administration of arsphenamin may prevent a patient from developing a natural immunity, and a relapse may occur shortly after treatment is discontinued. Cerebrospinal syphilis can develop by the time the chancre is manifest. Every patient should have a spinal puncture preferably just before the second course of arsphenamin. A provocative Wassermann may be misleading and may be dangerous in that a relapse may follow it. A luetin reaction under proper precautions may be of value as a criterion of cure. The results of treatment in early secondary syphilis are surprisingly good. A few cases of late syphilis can be cured, but in the vast majority of instances late syphilis cannot be cured. Intraspinal therapy will often yield results when intravenous therapy fails.

Proportion of Physicians to Population—The 1921 directory of the American Medical Association listed 8,034 legally qualified physicians in Ohio. This array of medical talent serves "5,759,394 persons, or conversely, there is one physician for every 717 people in the state."

"Such service," the survey shows, "per physician, is slightly in excess of the average for the United States and more than double that of England. The average for the United States is 765; for England, 1,537; for France, 1,960; for Germany, 2,134; for Austria, 2,319, and for Russia, 7,865.

"Among the forty-eight states, Ohio ranks twentieth in the number of persons per physician. The State of California leads with an average of 508 and South Carolina is last with 1,160."—From report of Committee on Medical Economics, Ohio State Medical Journal, May, 1923.

ACKNOWLEDGMENT OF REPRINTS

- Ball, Jau Don., The Correlation of Neurology, Psychiatry, Psychology, and General Medicine as Scientific Aids to Industrial Efficiency. Reprinted from American Journal of Insanity, Vol. LXXV, No. 4, April, 1919.
- Industrial Psychiatry. Reprinted from American Journal of Psychiatry, Vol. 1, No. 4, April, 1922.
- Bolin, Zera E.
See Simmons, James S.
- Card, Thomas A.
See Slonaker, James Rollin.
- Collings, H. A. A Reasonable Treatment for Typhoid. Reprinted from the California State Journal of Medicine, February, 1915.
- Faber, Harold K.
See Schussler, Jr., Hermann.
- Gottlieb, A. The Prevention and Treatment of Localized Muscular Contractures. Reprinted from the California State Journal of Medicine, May, 1918.
- Deformities of the Hand Acquired After Accidents. Reprinted from the California State Journal of Medicine, February, 1921.
- Industrial Injuries—Prevention of Loss and Restoration of Function. Reprinted from Northwest Medicine, February, 1922.
- Heppner, Maurice.
See Stevens, William E.
- Kellogg, W. H., The Intracutaneous Guinea-Pig Test (Kellogg). Reprinted from the Journal of the American Medical Association, March 17, 1923, Vol. 80, pp. 748-750.
- Krotoszyner, Martin.
See Stevens, William E.
- Lisser, H., Absence of the Prostate Associated with Endocrine Disease. Reprinted from the California State Journal of Medicine, December, 1922.
- Lockwood, Charles D., Some Newer Aspects of Chest Surgery. Reprinted from International Clinics, Vol. III, Series 32.
- The General Surgeon, Past, Present and Future. President's Address (presented at the thirty-first annual meeting of the Western Surgical Association, St. Louis, December 9 and 10, 1921).
- Mills, H. W., Hydatid Cysts of the Heart, with report of case. Reprinted from Surgery, Gynecology, and Obstetrics, October, 1922, pp. 455-461.
- Moore, Lillian M., Periodic Variations in Cardio-Vascular Activities and in Respiratory Rate in Women (Preliminary Report). University of California Publications in Physiology, February 2, 1923.
- Pottenger, F. M., General Medical Men Can and Must Make a Diagnosis of Tuberculosis If Satisfactory Results in Treatment Are to Be Obtained. Reprinted from Northwest Medicine, September, 1922.
- A Discussion of Classifications in Tuberculosis: The Anatomic Versus the Physiologic Conception.
- Schussler, Jr., Hermann, and Faber, Harold K., Leishmaniasis in the United States—Report of the Third American Case of Kala-azar and of a Case of Oriental Sore. Reprinted from the Journal of the American Medical Association, January 13, 1923, Vol. 80, pp. 93-97.
- Scwall, R. J., Caisson-Disease on the Cuyuna Iron Range. Reprinted from the Journal-Lancet, May 15, 1915.
- Simmons, James S., and Bolin, Zera E., Dermatitis Venenata Produced by an Irritant Present in the Stem Sap of the Mango (*Magnifera Indica* L.). Reprinted from the American Journal of Tropical Medicine, Vol. 1, No. 6, November, 1921.
- Skeel, Roland E., Clinical Mistakes in Gynecologic Diagnosis. Reprinted from the California State Journal of Medicine, October, 1922.
- Presidential Address American Association of Obstetricians, Gynecologists, and Abdominal Surgeons. Reprinted from the American Journal of Obstetrics and Gynecology, Vol. V, No. 2, February, 1923.
- Slonaker, James Rollin, and Card, Thomas A., The Effect of a Restricted Diet—I. On Growth. Reprinted from the American Journal of Physiology, Vol. LXIII, No. 3, February, 1923.
- Effect of a Restricted Diet—II. On Pubescence and the Menopause. Reprinted from the American Journal of Physiology, Vol. LXIV, No. 1, March, 1923.
- The Effect of a Restricted Diet—III. On the Number of Litters and Young Born. Reprinted from the American Journal of Physiology, Vol. LXIV, No. 1, March, 1923.
- The Effect of a Restricted Diet—IV. On the Age of Greatest Productivity. Reprinted from the American Journal of Physiology, Vol. LXIV, No. 2, April, 1923.
- The Effect of a Restricted Diet—V. On Mortality, Cannibalism, and the Sex Ratio. Reprinted from the American Journal of Physiology, Vol. LXIV, No. 2, April, 1923.
- Stevens, William E., Stricture of the Urethra in Women. Reprinted from the California State Journal of Medicine, February, 1922.
- Diagnosis and Treatment in Pathologic Conditions of Urinary Tract in Children—Modern Methods. Reprinted from the Journal of the American Medical Association, Oct. 1, 1921, Vol. 77, pp. 1081-1085.
- and Heppner, Maurice, The Treatment of Gonorrhea and Syphilis in Women. Reprinted from the California State Journal of Medicine, August, 1919.
- Gonorrhea of the Lower Genito-Urinary Tract in Women—With Special Reference to the Glands of Bartholin. Reprinted from the Journal of the American Medical Association, Nov. 27, 1920, Vol. 75, pp. 1477-1479.
- and Krotoszyner, Martin, The Intravenous Phlorizin Test. Reprinted from the Journal of the American Medical Association, Dec. 1, 1917, Vol. LXIX, pp. 1865-1871.
- Voorsanger, William C., Heliotherapy in the Treatment of Laryngeal Tuberculosis. Reprinted from the American Review of Tuberculosis, Vol. VI, No. 3, May, 1922.
- Gastro-Intestinal Complications Accompanying Pulmonary Tuberculosis. Reprinted from the California State Journal of Medicine, September, 1922.
- The Present Status of Therapy in Pulmonary Tuberculosis. Reprinted from the California State Journal of Medicine, February, 1923.
- Wesson, Miley B., Pyelography: Common Diagnostic Errors. Reprinted from the California State Journal of Medicine, May, 1923.
- Wulzen, Rosalind, A Study in the Nutrition of an Invertebrate, *Planaria Maculata*. University of California Publications in Physiology, February 2, 1923.

What Is the Future of Medicine?—Prevention of disease? Yes—as it has been since the first dose of the first known medicine—castor oil, was given to prevent the absorption from the alimentary canal of disease germs. The early recognition of disease and correction of same? Yes, how easy, sometimes, to prevent disaster by the removal of a small nodule which might become a cancer.—From annual address of the president of the Ohio State Medical Association, Robert Carothers, Ohio State Medical Journal, June, 1923.

Nevada State Medical Association

By HORACE J. BROWN, M. D., Reno, Secretary Nevada State Medical Association, Associate Editor for Nevada.

J. LA RUE ROBINSON, Reno, President

With the largest attendance of any meeting that has been held on the Pacific Coast, the A. M. A. has again proven it is a good organization to belong to. In spite of the enemies of organized medicine, and the efforts of a few Bolshevistic members, with personal spites at some of the officers, it has continued on the even tenor of its way and stands today as the most powerful influence for all that is good in medicine. The lambasting given to quack medicine manufacturers; the fight against diploma mills; its criticism of certain "Rim fire" medical journals and its campaign against the irregulars has made it quite a number of very desirable enemies, but every conscientious, progressive physician should feel proud of its attainments and should lend his aid to the furtherance of its ideals. As is common with all human endeavor, it is probable that many mistakes have been made but we believe that the aim has always been to better the conditions of all regular practitioners of medicine. We were glad to find that some twenty-five of our members were registered at the meeting and we feel sure that each one of them feels well repaid for the time and expense incurred in attending so pleasurable a session. While there, we secured the promise of several good men to read papers for us this fall, so you can rest assured that our scientific program will be up to its usual high standard—and the same can be said of the entertainment features. So far, we have the names of three Nevada men that will read papers, but that isn't enough and we would like to hear from about nine more, so get busy and let's hear from YOU.—Nevada Medical Bulletin, July 1, 1923.

Your editor is associate editor, for Nevada, of the California State Journal of Medicine, which is our official Journal. We quote, in part, from a letter from Dr. Musgrave, who is the editor of that publication: "We would be glad to publish for you such news and information as you wish to have reach your members and other readers of our Journal. It will be the purpose of our Journal to treat the members of the N. S. M. A. exactly as we treat those of California, Utah, and other units for which the Journal is spokesman. We would be glad to have every month, before the fifteenth, the matter which you wish published the following month." "There is one form of advertising which ought to appeal to some of the doctors of your State, and that is our directory of physicians. These cards cost \$30 a year or \$20 for six months." "We hope with your co-operation to make our Journal, under its present name or some other name, a big feature in medical journalism." Now if you have any news items, and will send them in, we will be glad to forward them on for publication. Personal items, such as removals, marriages, deaths, births, etc., are acceptable as well as hospital news and public health matters. Papers that comply with the council rulings will be accepted for publication, and we will require each essayist to deposit his paper with the secretary, this year, so they can be sent in for consideration. If anyone desires to have a professional card printed in the Journal we would be glad to attend to that also. Are you getting ready for September 28, 29, 30? We are counting on a registration of 100 and the entertainment committee is going to prepare for that number. They hope to have a banquet in the new banquet room of the Hotel Golden on the night of the 29th, to which the ladies will be invited, so

you had better speak to the missus about it and prepare to bring her along. In order to gain admittance you will need a 1923 card, and if you don't happen to have one, the secretary will be glad to send you one upon receipt of a check for five.—Nevada Medical Bulletin, July 15, 1923.

Charles C. Blake, Goldfield, lost his entire office equipment in a fire that destroyed most of the business section of the town on July 6.

Raymond St. Clair has removed from Reno to Oakland, California, where he will specialize in surgery.

Allen L. Haenszel, formerly of Searchlight, is now located at Pasadena, Cal.

F. C. Pache, who practised for a number of years at Hawthorne, is now in San Diego, where he is specializing in diseases of the chest.

George McKenzie, Reno, who has been under treatment at Lane hospital for several weeks, is reported as being somewhat improved.

St. Mary's hospital, Reno, after a year of reorganization and adjustment, has been accepted as eligible for recognition by the A. C. S.

The annual meeting of the Nevada State Medical Association will be held in Reno September 28, 29, and 30. The first two days will be devoted to the scientific assembly and business meetings, while the last day, which is Sunday, will be spent in picnicking at Pyramid lake.

Utah State Medical Association

W. R. CALDERWOOD, M. D., Salt Lake City,
Associate Editor for Utah

Utah State Medical Meeting—The twenty-ninth annual meeting of the Utah State Medical Association was held in Salt Lake City, June 20-22. Clinics were held in the hospitals of the city, and many members of the American Medical Association attended the sessions on their way through to San Francisco. Drs. Herman L. Kretschmer, Carl Beck, and Albert J. Ochsner of Chicago; Harry H. Kerr, Washington, D. C.; Emanuel Libman, New York, and Vilray P. Blair, St. Louis, were some of the visiting speakers.

The following officers were elected for the ensuing year: President, Dr. Joseph R. Morrell, Ogden; president-elect, Dr. Sol. G. Kahn, Salt Lake City; vice-presidents, Drs. Lashbrook B. Laker, Eureka, Thomas C. Gibson, Salt Lake City, and Homer E. Rich, Vernal; secretary, Dr. William L. Rich, Salt Lake City; treasurer, Dr. Frederick L. Peterson, Salt Lake City.

Editor's Note—The proceedings of the House of Delegates will be published in the September number of the Journal.

The Potency of Some Common Digitalis and Strophanthus Preparations—The potency of a group of the more common digitalis and strophanthus preparations has been examined by G. F. Strong, Vancouver, B. C., and Albert Wilmaers, Brussels (Jour. A. M. A., May 5, 1923), by the cat method. The results show that there has been considerable improvement in the strength of the digitalis that is available to the average patient. Tinctures, leaves in pill form, and some liquid preparations of digitalis and strophanthus in ampules were found to approximate fairly closely the expected standards; that is, the minimal lethal dose per kilogram (cat unit) is 1 c. c. of tincture of digitalis, 0.1 gm. of the powdered digitalis leaf, 0.1 mg. of crystalline strophanthin, and 0.3 mg. of digitoxin.

BOOKS RECEIVED

Outline of Ultra-Violet Therapy. By A. J. Pacini, M. D., 1923, Poole Bros., Chicago.

Rake Knitting Patterns. By Bertha Thompson, Organizer and Director of Occupational Therapy and Principal of the Summer School of Occupational Therapy, Woodstock, N. Y. The Bruce Publishing Company, Milwaukee, Wisconsin.

Food for the Diabetic—What to eat and how to calculate it with common household measures. By Mary Pascoe Huddleson, Consulting Dietitian, with an introduction by Nellis Barnes Foster, M. D., assistant professor of medicine at Cornell University Medical School, and Associate Physician, New York Hospital. New York: The Macmillan Company, 1923.

The Infant and Young Child. Its care and feeding from birth until school age. A manual for mothers. By John Lovett Morse, M. D., Edwin T. Wyman, M. D., and Louis Webb Hill, M. D., of Harvard Medical School and Children's Hospital, Boston. 12mo., of 271 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1923. Cloth, \$1.75 net.

A Manual of Artificial Respiration. Compiled by Capt. G. R. G. Fisher, director of accident prevention and instructor in first aid to industries and civic organizations (in affiliation with the Manufacturers' Association, the Chamber of Commerce), Omaha, Nebraska. 1923. The Stratford Company, Publishers, Boston.

Recovery Record for Use in Tuberculosis. By Gerald B. Webb, M. D., and Charles T. Ryder, M. D., Pocket Size, two years' record. Paul Hoeber, Inc., Publishers, New York.

International Clinics. A quarterly of illustrated clinical lectures and especially prepared original articles. By leading members of the medical profession throughout the world. Edited by Henry W. Cattell, M. D., Philadelphia, with the collaboration of Charles H. Mayo, Sir John Rose Bradford, Hugh S. Cumming, William S. Thayer, John G. Clark, Frank Billings, James J. Walsh, A. McPhedran, Charles Greene Cumston, Sir Humphrey Rolleston, John Foote, Seale Harris, Charles D. Lockwood, A. H. Gordon, James Burnet. Volume II, Thirty-third series, 1923. Philadelphia and London: J. B. Lippincott Company, 1923.

Annual Report of the Board of Regents of the Smithsonian Institution, 1921. Washington, Government Printing Office, 1922.

Annals of Roentgenology. A series of monographic atlases. Edited by James T. Case, M. D., ex-president of the American Roentgen Ray Society. Volume Three, Digestive Disturbances in Infants and Children Roentgenologically Considered. By Charles Gilmore Kerley, M. D., and Leon Theodore LeWald, M. D. Paul B. Hoeber, New York.

Pharmacology and Therapeutics

COUNCIL ON PHARMACY AND CHEMISTRY OF THE A. M. A.

(Reported by W. A. Puckner, Secretary)

The June report of the Council on Pharmacy and Chemistry notices a number of new remedies admitted to New and Non-official Remedies, as well as some interesting data about other remedies:

Abbott Laboratories—Amidopyrine-Abbott, tablets, 5 grains; Epinephrin-Chloride Solution-Abbott.

Eli Lilly & Co.—Iletin (Insulin-Lilly), H-10:5 cc. ampules, H-20:5 cc. ampules.

Powers-Weightman-Rosengarten Co.—Sulpharsphenamine Billion, 0.1 gm. ampules, 0.2 gm. ampules, 0.3 gm. ampules, 0.4 gm. ampules, 0.5 gm. ampules, 0.6 gm. ampules.

NEW AND NON-OFFICIAL REMEDIES

Insulin—An aqueous solution of an active principle from pancreas which effects sugar combustion. The strength of insulin is expressed in "units," one unit being one-third of the amount required to lower the blood sugar below 0.045 per cent and cause convulsions in a rabbit weighing 2 kg. which has been previously starved for twenty-four hours. The administration of insulin to diabetic dogs and to man in severe cases of diabetes mellitus restores to the body the lost ability to oxidize carbohydrate, and glycogen is again stored in the liver. If insulin is administered at suitable intervals to a person suffering from diabetes mellitus, the blood sugar is maintained at a normal level and the urine remains free of sugar. Fat is also burned and, as a result, ketone bodies do not appear in the urine and diabetic acidosis and coma are prevented. The administration of insulin is indicated in cases of diabetes mellitus which cannot be controlled satisfactorily by dietetic treatment. Overdosage of insulin is followed by the development of serious symptoms which demand immediate treatment. Insulin is administered subcutaneously one, two, or three times a day before meals. The dosage required to reduce the blood sugar to the normal level must be established for each patient by determination of the blood sugar before and after administration of insulin. In cases of coma or severe acidosis, an initial dose of 15 or 20 units of insulin may be given, followed at three to four hour intervals by smaller doses with simultaneous administration of glucose.

Insulin (Toronto)—A brand of insulin. It is marketed in 5 cc. vials containing 10 units in each cc., and in 5 cc. vials containing 20 units in each cc. Connaught Antitoxin Laboratories of the University of Toronto, Toronto, Ontario, Canada.

Quinine Ethyl Carbonate—The quinine ester of ethyl carbonic acid. Quinine ethyl carbonate was first introduced as euquinine. It is used in place of quinine sulphate and similar soluble quinine salts when a practically tasteless quinine compound is preferred.

Iletin (Insulin-Lilly)—A brand of insulin. (See Jour. A. M. A., June 2, 1923, p. 1617.) It is marketed in 5 cc. ampules containing 10 units in each

cc. and in 5 cc. ampules containing 20 units in each cc. Eli Lilly & Co., Indianapolis, Ind. (Jour. A. M. A., June 23, 1923, p. 1851.)

Amidopyrine (Abbott)—A brand of amidopyrine—N. N. R. (See New and Non-Official Remedies, 1923, p. 250.) It is marketed in substance and in 5 grain tablets. Abbott Laboratories, Chicago, Ill.

Epinephrin Chloride Solution (Abbott)—A solution containing epinephrine chloride, equivalent to 1 part of epinephrine in 1,000 parts of physiological solution of sodium chloride, preserved by the addition of benzoic acid and saturation with carbon dioxide. (For a discussion of the actions, uses and dosage of epinephrine see New and Non-Official Remedies, 1923, p. 112.) Abbott Laboratories, Chicago, Ill. (Jour. A. M. A., June 30, 1923, p. 1910.)

Calcium Therapy in Tuberculosis—From a review of the literature, Maver and Wells concluded that there is no convincing clinical evidence of the value of calcium administration in tuberculosis. They believe that no deficiency in blood calcium exists in tuberculous patients. From carefully controlled animal experiments these investigators conclude that calcium administration does not affect the course of tuberculosis in animals. If the use of calcium compounds in the treatment of tuberculosis is to be continued, clinical experiments of a scientific character should be conducted. At the present time there appears to be no scientific basis for the use of calcium in tuberculosis. (Jour. A. M. A., June 2, 1923, p. 1619.)

Progress and Conservatism in Therapeutics—The committee on therapeutics of the Council on Pharmacy and Chemistry has published a communication calling attention to two books which physicians should have—New and Non-Official Remedies and Useful Drugs. It is explained by the committee that for eighteen years the council has done its utmost to bring before the medical profession the truth concerning the new proprietary medicinal preparations which are being offered to the profession. The work and functions of the council are discussed, and it is explained that, while the council was organized primarily to put a stop to the exploitation of proprietary medicines under false claims and the use of secret preparations, its activities have broadened until its work may now be characterized as a "propaganda for the rational use of drugs." The communication concludes: "New and Non-Official Remedies" and "Useful Drugs" together furnish information concerning all drugs, old and new, which are at present essential to, or give promise of value in, the practice of medicine. They have been compiled with a special object in view, namely, to meet the needs of the student and practitioner of today. The report is signed by C. W. Edmunds, M. D., professor of materia medica and therapeutics, University of Michigan, Ann Arbor, Mich.; John Howland, M. D., professor of pediatrics, Johns Hopkins University, Department of Medicine, Baltimore, Md.; Ernest E. Irons, M. D., Ph. D., associate professor of medicine, Rush Medical College, Chicago, Ill.; W. T. Longcope, A. B., M. D., professor of medicine, Johns Hopkins University, Department of Medicine, Baltimore, Md.; G. W. McCoy, M. D., director hygienic laboratory, United States Public Health Service, Washington, D. C.; W. W. Palmer, B. S., M. D., bard professor of medicine, College of Physicians and Surgeons, Columbia University, New York City; Francis W. Peabody, M.

D., professor of medicine, Medical School of Harvard University, Boston, Mass.; L. G. Rowntree, M. D., Sc. D., professor of medicine, Mayo Foundation, Rochester, Minn. (Jour. A. M. A., June 2, 1923, p. 1635.)

More Misbranded Nostrums—The following preparations have been the subject of prosecution by the federal authorities charged with the enforcement of the Food and Drugs Act: Woods V. Tabules (Edward J. Woods), containing zinc phosphid, strychnin, and plant extractives. Lukosine (National Drug Co.), a powder containing approximately 80 per cent of boric acid and small proportions of zinc sulphate, alum, and a salicylate, and traces of alkaloid, phenol, thymol, and menthol. Eckman's Alterative (Burrows-Little-White Co.), consisting essentially of 94.4 per cent of water flavored with clove oil, 3.3 per cent of calcium chlorid and 2.3 per cent of plant extracts. Gombault's Caustic Balsam (Lawrence-Williams Co.), a mixture of a fatty oil with approximately 20 per cent by volume of oil of turpentine. McGraw's Oil of Life (McGraw Remedy Co.), consisting approximately of 95 per cent of kerosene and small proportions of turpentine oil, tar oil, and camphor. Vital Sparks (Hollander-Koshland Co.), gelatin capsules containing a fatty oil, colored red, and a sugar coated pill of zinc phosphid, damiana, and strychnin. Mydyl Antiseptic Wafers (Charles S. Ruckstuhl), composed of borax and starch. Syrup Leptinol (Balsamea Co.), consisting of Leptotaenia dissecta (a plant belonging to the parsnip family), sugar, glycerin, alcohol, and water. Sangvin (Dr. M. Spiegel & Sons), composed essentially of plant drugs including a laxative drug, sugar, alcohol, glycerin, and water. Peterson's Ointment (Peterson's Ointment Co., Inc.), a petrolatum ointment containing zinc oxid, tannin, phenol, and camphor. (Jour. A. M. A., June 9, 1923, p. 1710.)

Cod Liver Oil in Tuberculosis—Experiments carried out in the hygienic laboratory of the United States Public Health Service to determine the effect of cod liver oil on the tuberculosis of the guinea-pig failed to show any definitely beneficial effects. There was no evidence of the deposition of calcium when this element was administered along with the cod liver oil. These results warn against unwarranted optimism and justify critical investigation whenever calcium or cod liver oil are lauded as a specific in tuberculosis. (Jour. A. M. A., June 16, 1923, p. 1778.)

Peptone in the Treatment of Migraine—The Council on Pharmacy and Chemistry publishes a preliminary report on the experimental status of the use of peptone in the treatment of migraine. Drs. Joseph L. Miller and B. O. Raulston report that the intravenous administration of Peptonum Siccum (Armour) brought about improvement in a considerable number of cases. The council points out that commercial peptones are heterogeneous mixtures of uncertain composition, and that the results reported may have been due to tissue impurities rather than to peptone itself. It is, therefore, evident that the reported results cannot be made the basis for a rational treatment of migraine. Peptone Siccum is stated by Armour & Co. to contain 90 per cent of protein. Seventy per cent of the protein content is in the form of peptone and secondary proteoses, while the remaining 30 per cent is in the form of amino-acids. Those who wish to make experiments with peptone in the treatment of migraine should use the particular peptone used by Miller and Raulston or one which has an essentially similar composition. (Jour. A. M. A., June 30, 1923, p. 1910.)

PEDICULOSIS, CHIROPRACTICALLY SPEAKING

The ranks of chiropractic are torn with dissension. There are two camps, the Big-endians and the Little-endians, or, more descriptively, the strict constructionists and the liberal constructionists, the literalists and the latitudinarians. The strict constructionists are the 100 per cent boys. To them, pathology and therapeutics begin and end in chiropractic. All human ailments, from soft corns to hardening of the liver, are due to subluxated vertebrae impinging on nerves, and the cure of all these ailments lies in the "adjustment" of these subluxations. Those in the latitudinarian camp, on the other hand, take a more rational, if less orthodox view, of both pathology and treatment. They admit that there are certain pathologic states that are not explainable on the chiropractic theory, and that there are certain conditions that may be more efficiently treated by methods other than the "chiropractic thrust." The amount of feeling exhibited by the opposing camps is characterized by more heat than light. The chief and most valiant exponent of the orthodox school of chiropractic is B. J. Palmer of Davenport, who is familiarly dubbed by his disciples "B. J." This individual is the son of D. D. Palmer, who founded the "Palmer School of Magnetic Healing," which, as the "magnetic healing" game became passe, evolved into the "Palmer School of Chiropractic." A year or so ago, the Palmer School of Chiropractic at Davenport brought suit against the city of Edmonton, an Edmonton physician and the College of Physicians and Surgeons of the Province of Alberta asking \$20,000 damages for matter that had been published that the Palmer concern considered libelous. It may be said, in passing, that the Davenport institution did not get a verdict but had to pay its own costs. The star witness for the chiropractors was B. J. Palmer, the redoubtable "B. J." Palmer's testimony under oath in this case makes very funny reading, or it would be funny if one could forget that chiropractic is a menace to the public health. One of the questions asked Palmer was relative to the chiropractic treatment for lice. Palmer oracularly answered:

"The Chiropractic Philosophy constantly imbues the same fundamental thought that all external or internal germs, or other scavengers, are scavengers strictly in the sense that they live upon body waste and dead matters; the purpose of the Chiropractic adjustment being to make normal tissue that there would be no waste matter upon which any kind of scavenger could live either inside or outside of the body."

Then followed these questions put by the attorney for the city of Edmonton, and the answers made by B. J. Palmer:

"Question—And what particular vertebra did you teach them to adjust for lice on the head, if any?"

"Answer—The adjustment for any scavenger would depend entirely upon where that scavenger was.

"Q.—Well, take scavengers such as lice on the head; what vertebra would you adjust for those?"

"A.—In the cervical region.

"Q.—And suppose you had body lice in the groin, what vertebra would you adjust for those?"

"A.—In the lumbar region.

"Q.—Any particular vertebra?"

"A.—It would depend entirely upon the particular one subluxated. It might fluctuate in different individuals.

"Q.—What fluctuations would there be there?"

"A.—From the second to the fifth, inclusive; it could be any one."

Comment on this would be painting the lily and gilding refined gold.—*Jour. A. M. A.*, May 26, 1923.

NEW MEMBERS

Manteca—Olin H. Garrison.

Stockton—John F. Blinn.

Lodi—John J. Seible.

DEATHS

Lustig, Daniel D. Died at San Francisco, June 27, 1923, age 61. Graduate of the University of California Medical School, 1885. Licensed in California in 1885. He was a member of the San Francisco County Medical Society, the California Medical Association, and the American Medical Association.

Serviss, T. Wilson. Died at San Francisco, June 28, 1923, age 66. Graduate of McGill University Faculty of Medicine, Montreal, 1881. He was formerly a member of the San Francisco County Medical Society, the California Medical Association and the American Medical Association.

Temple, Jackson. Died at Santa Rosa, June 22, 1923, age 44. Graduate of the University of California Medical School, 1906. Licensed in California in 1906. He was a member of the Sonoma County Medical Society, the California Medical Association and the American Medical Association.

The Vaginal Pessary—The two most important indications for the use of the vaginal pessary, according to Emil Novak, Baltimore (*Jour. A. M. A.*, May 5, 1923), are prolapse and retrodisplacement of the uterus, in certain cases only and under certain conditions only. Retroversions offer a far more hopeful field than the backward flexions. With the latter, the fundus is apt to be large and heavy, so that it falls backward over the posterior arm of the pessary. Puerperal retrodisplacements furnish one of the most frequent and most important indications for the employment of the pessary. In a large proportion of the cases, the wearing of the pessary for a short time, usually only a few weeks, is all that is necessary, and there is no tendency to a recurrence of the retrodisplacement. Retrodisplacement or prolapse with pregnancy is also a most important indication for the use of the pessary. In case of prolapse in old women, the indication is particularly strong when there is extensive ulceration of the everted and thickened mucosa covering the cervix or vagina, so that the danger of malignancy becomes a real one. The type of pessary best suited for complete prolapse is unquestionably some form of ring pessary, made of hard rubber. A rather large ring is usually necessary, although the size must, of course, be adapted to the individual case. In many cases in which, on purely physical grounds, operation is indicated clearly enough, but in which the patient simply cannot or will not submit to radical measures, the pessary may be worn as a temporary measure until the necessary operative procedure can be carried out. As a test to determine the pathologic importance of retrodisplacements, the pessary is often an aid. There are three chief contraindications to the employment of pessaries in the treatment of retrodisplacements: (1) the inability to replace the uterus to at least approximately its normal position before inserting the pessary; (2) the existence of a marked degree of perineal relaxation, and (3) the existence of chronic pelvic inflammatory disease.

California State Journal of Medicine

OWNED AND PUBLISHED MONTHLY BY THE CALIFORNIA MEDICAL ASSOCIATION

BALBOA BUILDING, SECOND AND MARKET STREETS, SAN FRANCISCO

Editor	W. E. MUSGRAVE, M. D.
Secretary	EMMA W. POPE, M. D.
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VOL. XXI

SEPTEMBER, 1923

No. 9

ORIGINAL ARTICLES

RESPONSIBILITY FOR STATEMENTS AND CONCLUSIONS IN ORIGINAL ARTICLES

The author of an article appearing in the JOURNAL is entirely responsible for all statements and conclusions. These may or may not be in harmony with the views of the editorial staff. Furthermore, authors are largely responsible for the language and method of presenting their subjects. All manuscripts will be carefully read, but editorial privileges will be exercised only to a very limited extent. It is believed that the manner of presentation of any subject by any author determines to no small degree the value of his conclusions. Therefore, both the author and the reader, in our opinion, are entitled to have the subject as presented by the author as little disturbed as possible by the editors. However, the right to reduce or reject any article is always reserved.

GRADUATE INSTRUCTION FOR PHYSICIANS IN GENERAL PRACTICE *

By T. C. ROUTLEY, M. D., Toronto, Canada

Mr. Chairman, Ladies, and Gentlemen: To be with you today and to be accorded a place on your program is a privilege and an honor which I highly appreciate. Permit me at the outset to state that I bring you cordial greetings from your brother practitioners in Canada, many of whom will, no doubt, co-mingle with you during the next week. As their representative and advance guard, I must state that the warmth and heartiness of the welcome which has been accorded to me bespeaks for my home colleagues a most kindly and pleasant atmosphere during their sojourn among you.

The subject which I have selected to take up with you is "Graduate Instruction for Physicians in General Practice." As secretary of the Ontario Medical Association for the past five years, and, more recently, having been appointed general secretary of the Canadian Medical Association, it has been both a duty and a pleasure for me to be somewhat intimately associated with the study of this problem.

There is a command which says: "Go ye into

all the world and preach the Gospel." The Gospel which it would be my pleasure to spread is one which would make better doctors for better service. And, after all, what higher calling is there than that which the followers of our noble art enjoy—and to whom is given such privileges and responsibilities as befall the lot of the physicians, especially the family physician, the physician in general practice.

The message, then, that I particularly wish to bring to you, and the thought to which I humbly desire to direct your attention has to deal with one of the greatest problems confronting teachers and practitioners of medicine alike; namely, to repeat, graduate instruction for the men in general practice—or, to put it in other words, "brushing up" at home; or keeping up to date while remaining on the firing-line.

The situation is no doubt one which at some time or other has engaged the attention of each one of you. Without question, it is admitted that the general practitioner must keep abreast the times if he is to render efficient service. But how is he to do it? The logical answer is: by keen observation, reading, contact education among his fellows at scientific meetings, and post-graduate work at the available centers. To this, the busy general practitioner answers: "At the end of a long day I am frequently too tired to read. (His inspiration is not strong enough to combat physical fatigue.) I live very largely in a professional world of my own, working out my problems in my own way. Go away to brush up! There are two outstanding difficulties in the way, namely, I have no one to leave in my place to take care of my people; and, secondly, the cost is too great owing to the fact that all is going out and nothing coming in while I am away; so I don't go away to post-graduate, with the result that the years come and go, finding me just a little further behind until—well, the rest of the picture is well known to you all." And lying back of the restraining reasons which are advanced is the outstanding psychological factor of the deficient stimulus ultimately leading on to placid resignation.

Possibly, in an endeavor to bring out the picture in bold relief, one may have exaggerated it somewhat; but, fundamentally, our premises are correct.

Is it necessary to brush up? asks a calculating layman. So far as I can see our old family doctor of thirty years ago gave us just as good service as the modern physician of which you speak. (Yes,

* Doctor Routley, who is secretary of the Canadian Medical Association, was a guest of the California Medical Association at its Fifty-second Annual Meeting and an official delegate to the American Medical Association. This paper was read by invitation before the General Meeting of the California Medical Association in San Francisco, June 23, 1923.

bless the old patriarchs, and maybe better service, from the point of view of their patients of those days.) But what do we find has transpired in the realms of medical science during those thirty years, or the last twenty years, or ten years? The forward march bringing in blood, chemistry, metabolism, serum therapy, X-ray, radium, insulin, and the host of other accessories to the practice of medicine, bears unquestionable testimony to the advances which have been made. Is it not agreed, then, that, if these advances are to be placed at the service of the public, the general practitioner must be in a position to either utilize them or to see that their utility has a place in the lives of his patients?

And gentlemen, while we lay stress upon the advantages of learning new ideas, new applications, let us not lose sight of the equally paramount importance of keeping original knowledge so refreshed as to be of the greatest value in the life and work of the physician. This is a serious and vexed problem which must be squarely faced—certainly if not in California, in many parts of the country.

Fortunately, in the opinion of many, there is much that can be done, and it is of one solution that I primarily presented myself before you to touch upon. In brief, it is this: "Take the school to the men, rather than ask the men to come to the school."

In the Province of Ontario, an area with a population of 3,000,000, including 3400 medical practitioners, an honest attempt was made two years ago to carry graduate instruction to the men in practice. At that time, although the Ontario Medical Association was in its forty-first year, it had less than 1000 members and an annual budget considerably below \$5000.

A representative committee on education was appointed and vested with the necessary authority to complete a plan and put it into operation. There are three medical teaching centers in the province. Each faculty was asked to appoint contributors who would be willing to go out upon call to any part of the province. In addition, individual members outside the teaching centers who felt that they could deliver messages to their fellows were asked to help. In this manner, a schedule comprising 159 contributions on medical and allied subjects was prepared, printed and mailed to all practitioners in the province, with a covering statement that the provincial association would, upon request, bear the cost of sending six speakers to each county society during the following year. The local society was to choose both subject and speaker—the association undertaking to carry out all the necessary arrangements. Now, what happened. All over the province men began to discuss the advantages of the offer. Where no county medical society existed, one was quickly formed, and in a short space of time as many as ten speakers in one day were going out to the four corners of the province. In all, during the first year 231 speakers visited areas totaling approximately 60 per cent of the province. I had the privilege of attending and of assisting in organizing many of the county societies. When I tell you that in one typically rural society, with a total medical population of fifty-five, frequently forty-five

to forty-eight men turned out in an evening, bombarding the speaker with questions up to 1 a. m., and then set out to drive twenty-five to fifty miles home, you will realize with what eagerness and appreciation the plan was adopted. It was not long until we had established forty-three active units in the association, with a membership of over 2000, paying an annual membership fee of \$10. In addition to the funds thus raised, the plan received during its first year possibly its greatest tribute of appreciation in the form of a gift of \$5000 from the Canadian Red Cross Society, the officials of that body thus putting themselves on record that they knew of no better way of assisting in the relief of suffering and the prevention of disease than by helping to make better qualified doctors in all parts of the province.

Last year, the schedule was revised, 307 contributions being offered from which the profession might select topics of their choice. Again the Red Cross gave the association a second grant of \$5000, and the number of speakers sent out to each society—cost free to the society—was increased to eight. During the second year's operation of the schedule, close upon 275 addresses or demonstrations were given, making a grand total for the two years' operation of something over 500. Between 70 and 80 per cent of the area of the province was accordingly reached. Larger centers make up balance.

And now, may I retrace and give you a brief resumé of the plan:

1. The schedule now listing 359 contributions but *not* the names of the associated speakers, was sent to every practitioner in the province. This created first interest.

2. The county society first chooses its subjects and then, from the names of the associated speakers supplied by the central office of the association, *chooses* its speakers. Each member has his chance.

3. Speakers are called to address regular meetings of the county society, or special meetings arranged for the purpose, while in some centers a series of lectures on one branch, such as the heart, the kidneys, the lungs, are given.

4. The county society is responsible for at least one local paper at each meeting.

5. Both the speaker and the county society must file a report of each meeting which reports show the number of practitioners in the area, the number attending the meeting, program presented, whether the discussion was poor, bad, fair, good, or excellent; and such other information as in the opinion of the one reporting will assist in checking up the success or failure of the plan.

Not only does this reporting present illuminating and useful information, but it serves to keep all concerned carefully tabulated.

6. At the close of the year a chart is issued showing to what extent all parts of the province have utilized the services offered.

Time will not permit to make many observations upon the institution and carrying out of this type of post-graduate work, but possibly you will bear with me while I cite a few of the advantages.

Practically the whole medical profession of the

Province of Ontario has been organized into county or district societies.

These societies are meeting more or less regularly.

In addition to receiving and listening to post-graduate speakers sent them, local men are being encouraged to present papers. There has been a noticeable increase in the number of local men taking part.

A wonderful spirit of harmony, co-operation, and good fellowship is to be found in the respective counties, and also in the provincial association.

A real stimulus to reading has been supplied, and as far as can be ascertained from various sources the men are evincing a keener interest in medical literature.

In increasing numbers practitioners are arranging to get away to the academic centers. This spring the Ontario Medical Association received over 600 applications from the profession of the province, desiring to attend the diabetic clinics being given at the Toronto General Hospital by Banting and his associates.

Here are a few notations taken from the reports received at the provincial headquarters of the Ontario association:

"One lecture which we had was quite worth more than the annual membership fee in the association."

"It is a splendid piece of work and appreciated by the men of our district."

"Not only is it proving of great scientific benefit to our men, but it, in a large measure, accounts for the wonderful change of heart which has come over them in their feeling of marked cordiality toward the Ontario Medical Association and all of its work."

"Our men are being stimulated to prepare and read papers. The progress which has been made along this line during the past year has been very gratifying."

"It is doubtful if the men in larger centers realize how we men in the country districts appreciate these speakers coming to us from time to time."

It would be impossible for one to either comprehend or appraise the full value or the real significance of the *profession* doing this work for *itself* in this way. The fact remains that knowledge is being disseminated in a manner of distinct helpfulness, and with a minimum of inconvenience and loss of time and money to the man in general practice. At the same time, personal contact, which inspires harmony and confidence; mental stimulus, which makes men want to read and improve their knowledge; unity of thought and purpose, which can accomplish all good things—all of these are intimately interwoven and correlated with the work which I have endeavored to describe. The ultimate object—the *raison d'être*—of it all is simply this: that the public is receiving a better type of service, to which it is properly entitled, and the faith in the family physician is being restored and placed on that pinnacle which we believe it once occupied, but

from which, for various reasons during the past few decades, it appears to have fallen.

In conclusion, gentlemen, may I be permitted to cite to you one further benefit which I think has accrued to the public and to the profession of Ontario from the campaign of education to which I have referred.

For many years we have been endeavoring to secure medical legislation which would protect the public from the charlatans and parasites who are ever eager to prey upon the gullible and credulous.

Two months ago a medical bill was introduced which defines the practice of medicine (we think satisfactorily), puts up the bars to the irregulars, and places prosecutions in the department of the Attorney-General rather than in the hands of the medical profession where they are misconstrued by the public as persecutions.

Because we were organized and in a position to show the 110 legislative members that we were honestly endeavoring to give to the public service born of real effort and education, it is with considerable pride that I tell you that this medical bill went through the House and has become law, receiving in its final passage the endorsement of the entire Assembly.

If our plan is feasible (and we think it is) why not make it universal. Maybe you have it here. If not, I strongly urge you to adopt it.

Again, Mr. Chairman and gentlemen, permit me to say how delighted and honored I am to be with you today, and to thank you for the most courteous attention which you have given me.

Operative Treatment of Certain Fractures of Long Bones—The principle of "notching" has been employed by John J. Moorhead, New York (Journal A. M. A., April 28, 1923), in a series of cases reported, and success by this procedure has been so gratifying that in future many recent and old cases previously subjected to nonoperative reduction will be managed by this method. The time to operate is within the first thirty-six hours, if possible, the earlier the better, if there are none of the usual operative contraindications. The fragments are notched by a rongeur, chisel, saw or "bone notcher." Advantages claimed for this method are: (a) More accurate coaptation means firmer, earlier union in more exact alignment. (b) With the assurance that definite coaptation has been obtained, there is less danger of interposition of soft or hard parts which would prevent or impede union. (c) Primary neural or vascular damage is more readily discovered and corrected; secondary neural or vascular damage from pressure or callus inclusion is very unlikely. Disadvantages are: (a) Fractures are put into the operative class with the attendant risks of anesthesia and infection. (b) The method is needlessly severe and dangerous, since good results have heretofore been obtained by simpler methods. (c) It is inapplicable for general use. (d) It produces shortening. This is usually slight and of no importance. The method is particularly adapted to recent displaced or old malunited fractures of the shaft of the radius, ulna, tibia and humerus, in the order named. The femur is not included because skeletal traction is here so effective. Joint fractures are usually amenable to closed correction, perhaps excepting those of the elbow and some at the shoulder and ankle.

THE LATENT STAGE OF GALL-STONES AND ITS EARLY RECOGNITION *

By HENRY HERBERT, M. D.
Attending Physician, Los Angeles County Hospital

The object of this article is to offer a symptom-complex of the early or latent state of gall-stone disease, to show the fallacy of the prevailing idea that the latent stage is symptomless.

Many notable authors have duly recognized a precolic or latent stage, but they have not emphasized it sufficiently to give the subject a wider and broader recognition among physicians. Naunyn claims that every tenth person and every fourth elderly woman has gall-stones. Gall-stones are present in practically ten per cent of all bodies examined post mortem.

Bauer's statistics indicate that one per cent of all mankind is suffering from gall-stones.

These figures are quite startling and, if true, they show what a great number of patients' abnormalities are not diagnosed, and that many patients are ignorant of their affliction. If one wishes to make a practical conclusion thereof, one may consider that, out of 110,000,000 population of the United States, there would be 11,000,000 gall-stone carriers, or 1,100,000 people suffering from gall-stones. The term suffering in this instance needs some elucidation. No doubt by this term is meant the onset of biliary colic. The incidental frequent findings of gall-stones at the autopsy has led many to believe that the patient did not suffer from gall-stones, because the history sheets did not mention any previous gall-bladder trouble or colic.

Every gall-bladder which carries stones is diseased; therefore it is inconceivable how 90 per cent of the so-called gall-stone carriers can lead a life without symptoms as do stone-free people. Granted, even, that only 1,100,000 out of those above mentioned are suffering, surely the remaining 10,000,000 people do need some consideration and medical attention.

Gall-stone trouble may be classified as having three distinct phases:

- (a) An early or latent stage;
- (b) A stage of colic, and
- (c) A stage of supuration.

Pathologically the first stage presents gall-stones only, or gall-stones with cholecystitis; clinically it is called a latent or pre-colic stage, and its symptoms are or may be slight and obscure.

The second stage is a rather aggravated first stage pathologically and clinically; it is characterized by the attempt of the stone to pass the cystic duct accompanied by colicky attacks. The recognition of this stage is not difficult.

The pathology of the third stage comprises peritonitis, perforation or empyema—and clinically it is a purely surgical condition.

The peculiar feature of the latent stage is, that it has an unknown beginning and an existence for years without characteristic manifestations. It is impossible to say when gall-stones first become a source of trouble. Probably the cholecystitis is the etiological factor in the origin of gall-bladder sen-

sation and sensitiveness. Whether cholecystitis or something else, the effect upon the patient seems to be the same.

As gall-stones increase in number and in size, they cause a mechanical irritation of the gall-bladder, bringing about a series of local symptoms as well as reflex symptoms in remote organs.

The very earliest and most frequent sign of gall-bladder trouble is indigestion, provided that genuine gastric or other abdominal trouble is eliminated. Patients manifest a capricious appetite at times; at other times there are periods of anorexia, belching, pyrosis and a sense of heavy feeling in the epigastrium, particularly at night, or after heavy meals.

There is an instinctive aversion toward certain foods, such as meats, coffee, and liquors. In many patients the anorexia is profound in the morning and accompanied by a bad taste in their mouth.

In chronic cases the tongue is coated, whereas in the early cases the tongue may remain clean.

The expression "biliousness" as pertaining to the indigestion described above, holds a hidden truth. Biliousness is often accompanied by slight icterus visible in the sclera. Frequent spasms of the cystic duct probably promote absorption of some stagnant bile through the walls of the gall-bladder. Compression of the finger-nails will often elicit a yellowish tinge.

In spite of the gastric symptoms, however, most patients look healthy and gain in weight. Such a state of affairs may last for months or years. This group of patients comprise the bulk of so-called chronic dyspeptics, who lose confidence in the medical profession, because physicians are unable to cure their dyspepsia, indigestion, or constipation, and failing to be satisfactorily cured they turn to various outlets for relief. They try various waters, chiropractors, osteopaths, food specialists, and vegetarians.

All efforts, however, are in vain so long as the true cause is not recognized.

Patients often obtain temporary relief with or without treatment to be followed by depression upon recurrence of their symptoms. The slight symptoms may make it difficult to impress the patient with the gravity of his disease, and this psychological factor must be reckoned with by the physician in the management of those patients.

Constipation is next in order and importance to indigestion in the symptomatology. Although chronic irritation of any of the abdominal or pelvic organs of long standing may produce constipation, this symptom is very constant in conjunction with indigestion in gall-stone conditions.

The attitude of the gall-stone patients during the night is interesting. They are restless, turn from side to side, are wakeful and usually complain of insomnia; this can be explained from a postural standpoint. In an erect position the gall-bladder has its fundus pointing downward; in the lying position the fundus of the gall-bladder is directed upward, the cystic duct pointing downward. No doubt in this position a stone or stones congregate owing to the gravity towards the cystic duct, which becomes irritated causing spasm of the muscularis, thus rendering a mild form of

* Read before the Los Angeles County Medical Society, May 3, 1923.

colic, which commences like real colic. This is the so-called colic without great pain, but with enough irritation to cause discomfort and insomnia.

The effect of the change of position of the gall-bladder is illustrated by the following:

J. K., 77 years old, complained for the past twelve weeks of anorexia, capricious appetite, constipation, heavy feeling in the epigastrium and restlessness during the night. He voluntarily contributed the information, that when he lies on his back he cannot sleep, but if he lies on his abdomen he soon falls asleep.

Another illustrative case is that of a Mrs. F. T., 30, Italian, married, two children. In 1920 she was taken ill with indefinite symptoms; intermittent anorexia, constipation, palpitation of the heart, insomnia, debility, despondency. All tests and therapeutic efforts proved to be futile, when suddenly a turn for the better came without any apparent reason or without any definite therapeutic action. One fact in the narration of her "cure" is of interest, namely that whenever she slept on her back she felt sick, but when she lay on her abdomen, she began to sleep a great deal better and became much stronger.

Analysis of the stomach contents frequently does not reveal anything definite. Examinations of the duodenum, appendix, and colon usually give negative result, and traces of bile are found frequently in the urine.

Palpation of the abdomen shows a distinct rigidity and tenderness over the gall-bladder region. There is quite a variation in the degree of intensity of the "tenderness," ranging from simple soreness to actual pain, with a typical outcry. Naunyn's method of testing the hyper-sensitiveness of the gall-bladder is to put the right hand flat over the right side of the abdomen, pointing the fingers toward the gall-bladder and giving the hand a push upward during the height of inspiration. A certain jerk or outcry on the part of the patient will be noticed. John Murphy offered a helpful modification of Naunyn's method, wherein the patient is in the standing position, his trunk fixed upon his hip and thoroughly relaxed. The examiner standing behind inserts the palmar tips of his fingers (right hand) deeply in the right hypochondriac region, at the same time the patient is told to deeply inspire. If there is any gall-bladder disease, there will be a distinct reflex action noticed either by inhibition of inspiration or by pain.

A healthy gall-bladder will not cause pain or rigidity. Boas finds an area of increased tenderness on pressure on the right side posteriorly on a level with the twelfth dorsal vertebra, two to three finger-breadths from the spine (Moynihan). I have not encountered this symptom frequently enough to consider it significant or of any special value.

Testing the sensibility of the skin on the right and left side of the epigastrium with a pin, one will often find the right side more sensitive (Heads).

I have found a new and interesting therapeutic test which also has diagnostic value in distinguishing gall-stone colic from other similar pain. If opiates are given by rectum, in gall-stone colic it not only gives quick relief, but the relief seems to be of considerable duration, whereas in other painful conditions of the abdomen, its effect is slower and not lasting. Opium suppositories

in suspected gall-bladder irritation with nightly aggravation in patients in the first stage have given brilliant results. Patients may be relieved for days or weeks from a single treatment. The appetite improves and the patient has a period of recuperation.

This phenomenon explains the curious beneficial results sometimes obtained in the treatment of constipation by opium suppositories. The explanation is that in some instances, constipation is brought on by "spasms" of the large colon and that opium and belladonna may overcome such a "spasmodic" condition of the intestines. The fact is, the authors of this theory hit the truth without knowing the real reason.

Magnesium sulphate is also of great therapeutic and diagnostic value. From two to four teaspoonfuls of magnesium sulphate dissolved in a glass of hot water taken at the onset of a colicky attack may abort or stop the colic quite readily. This remarkable phenomenon distinctly corroborates Meltzer's conclusions regarding magnesium sulphate. He proved that the introduction of a twenty-five per cent solution of magnesium sulphate through a duodenal tube causes a complete relaxation, both of the local intestinal wall, and of Oddi's sphincter of the bile duct as well. The physiological action may explain the alleged therapeutic value of certain "mineral" waters. The observation of Meltzer induced Lyon of Philadelphia to aspirate the contents of the duodenum by Einhorn's duodenal tube, and he thus made the duodenal tube a valuable adjunct in the diagnosis of gall-bladder disease. The presence of cholecystitis and occasional aspiration of bile crystals or sand, speaks for gall-stones. The practical value of Lyon's test is limited. It has not yet been generally adopted, but the biliary drainage is greatly advocated, and is of value only in the hands of physicians skilled in its use.

There is a variety of reflex symptoms in gall-stone disease:

Bilious headache: Perhaps fifty per cent of the patients have frequent headaches.

Cardiac palpitation and precordial pain is frequent, but misleading, because it may be mistaken for angina pectoris. After heavy meals, or after certain foods, a very annoying palpitation of the heart may set in and similar manifestations occur quite frequently at night.

Chronic diseases of the bile ducts no doubt explain some cases of so-called "idiopathic" myocarditis. A number of physicians have noted that reflex disturbances such as dyspnoic attacks due to catarrh of the bile passages, may produce hypertrophy with enlargement of the right heart. Babcock claims that chronic diseases of the gall-bladder do cause chronic myocarditis. I have observed myocarditis of various degrees in patients suffering from gall-bladder trouble. In the second or colicky stage and in the third stage patients with gall-bladder disease may show distinct signs of chronic myocarditis. This condition is brought on in the latent stage either reflexly, as mentioned before, or by chronic irritation of the bile, or by toxemia from the infected areas in the bile passages.

Among various reflex pains, I wish to mention the pain in the interscapular space, mostly on the right side, or pain in the right shoulder region.

Dizziness, faintness, and weakness are frequent complaints during this stage. The chronicity of the trouble is no doubt responsible for many cases of "nervousness," neurasthenia, and even hysteria. Inertia, lack of ambition, and "bilious" temperament are occasionally met with in these patients.

Another interesting feature of gall-stone disease, at least in Southern California, is its seasonal feature. The greatest number of cases occur during the summer months, due probably to frequent attacks of gastro-intestinal infection. Such an infection spreads upward toward the biliary ducts, causing cholangitis and irritation of the gall-bladder with accentuation of its latent or dormant condition. According to Moynihan, "Ehret and Stolz fed dogs, in whose gall-bladders sterilized glass balls had laid for three months without causing symptoms, upon decomposing meats. An acute enteritis was set up and was followed by a purulent cholecystitis." This may account for the frequent bilious attacks of whites in the tropics, no doubt affecting only gall-stone carriers.

The diagnosis of gall-stones is not complete without a proper x-ray examination. F. W. Howard Taylor of Los Angeles says:

A normal gall-bladder has not sufficient density to be visualized on the radiograph. This being true, any patient having a gall-bladder which can be detected on the x-ray film has a pathological gall-bladder. This may be inflammation, thickening of the wall, stones, or a combination of both.

The diagnosis from the radiographic standpoint is divided into two major headings:

1st: The direct evidence; and 2nd, the indirect evidence.

1. Direct evidence.
 - a. Visualization on the radiograph of gall-stone or stones.
 - b. Visualization of the gall-bladder.
2. Indirect evidence.
 - a. Oval pressure defect on the duodenum or pylorus.
 - b. Pulled second portion of the duodenum.
 - c. Adhesions in the gall-bladder region.

These are most commonly found involving the duodenum and are shown in the "puckered up" or fringed appearance of portions of the duodenal wall. This shows an irregular thread-like or ribbon-like appearance of the barium-filled duodenum extending from this organ upward toward the gall-bladder.

The absolute ruling out of gastric or duodenal ulcer and appendicitis strengthens the possibility of gall-bladder disease in a patient with symptoms referable to the gastro-intestinal tract.

Negative finding on the radiograph is no absolute proof of the presence or absence of gall-bladder trouble, but it is apt to cause confusion in the mind of a patient and arouse his doubt and suspicion as to the correctness of the diagnosis. Patients are liable to lay too much emphasis upon the showing of x-ray findings.

ANNUAL CONFERENCE OF HOSPITALS OF CALIFORNIA, SAN FRANCISCO, OCTOBER 18, 19, and 20—SPLENDID PROGRAM ANNOUNCED.

Arrangements are being completed by the Hospital Betterment Bureau of the League for the Conservation of Public Health for the Annual Conference of the Hospitals of California, which will open in San Francisco, October 18. The Hospital Conference Committee prepared and mailed a tentative program to representative hospitals and to a selected list of persons interested in hospital betterment. Many valuable suggestions were received which will be incorporated in the complete program.

Among the outstanding features of the program this year will be an address by Ray Lyman Wilbur, president American Medical Association, on "The Duties and Responsibilities of the A. M. A. in Hospital Betterment"; "Hospitals as Educational Agencies," H. S. Pritchett; "Hospital Betterment in California," W. E. Musgrave, M. D.; "The California Medical Association and Hospital Betterment," T. C. Edwards, M. D., president California Medical Association.

State-wide interest is being manifested in "How May Hospital Care Be Furnished Most Efficiently to Those Who Cannot Afford to Pay the Full Cost for Such Service." Thursday afternoon, October 18, will entirely be devoted to a discussion of this subject, as many hospital administrators and directors want to present their views on this much discussed problem.

The subject for the morning meeting of Friday, October 19, is, "What Is the Best Method of Articulating the Hospital With Its Various Legitimate Contacts? Pathology and Clinical Laboratories, Radiology, Public Health Department, etc.," and for Friday afternoon, "Hospital Administration, Including Methods of Accounting, Reports, Methods of Admission, Classification and Discharge of Patients."

On Friday evening a big public meeting will be held under the combined auspices of the Hospital Betterment Bureau of the League for the Conservation of Public Health, the Narcotic Department of the City Federation of Women's Clubs and the Medical Society of the State of California.

There is so much publicity upon narcotic addiction which is based upon fiction instead of fact that it is incumbent on those familiar with the facts to present a constructive program.

"What Should California Do to Improve the Narcotic Situation in Our State?" by legislation, by administration, by medical prevention and treatment, by education, will be discussed by Curtis D. Wilbur, chief justice of the Supreme Court of California; Louise B. Deal, M. D., chairman of the White Cross Anti-Narcotic Society; James Rolph, Jr., mayor of San Francisco; Mrs. D. E. F. Easton, president City Federation of Women's Clubs.

Group luncheons during the first two days of the convention for "round table" discussions are being arranged by groups interested in the following special subjects:

Hospital Staffs and Staff Organizations; Nursing; Public Health Nursing and Medical Social Service; Laboratory Technicians; Physiotherapists; Roentgenologists; Dietitians; Library and Clinical Record Technicians; Organization and Management; Management of Municipal, County and State Hospitals.

And though you may be able to cheat history itself into the belief that you have been a great physician or surgeon, yet if you have not labored honestly and have permitted your skill to depend upon the whim of the lucre distributor, you will have while you live the humiliating feeling within you that you are far from being a great man in a great profession. "The applause of the listening senate to command" is meaningless and unsatisfying to your better thoughts.—(H. P. Ashe Pennsylvania Journal of Medicine.)

TREATMENT OF THE URETER, WHEN NEPHRECTOMY IS DONE FOR TUBERCULOSIS OF THE KIDNEY *

By L. R. REYNOLDS, M. D., San Francisco

When one considers the management of the ureter and the fatty capsule in nephrectomy for renal tuberculosis, one finds a great many different expressions of opinion, quite analogous to the unsettled condition which the entire question of surgery of kidney tuberculosis was in fifteen years ago. Because of these facts, one is justified in stating that the question of treatment of these two structures is not as definitely settled as in the case of the kidney.

I am not going into detail in regard to the fatty capsule, but the possibility of its being the cause of post operative sinus formation after nephrectomy must not be forgotten. The extensive work on the lymphatics of the kidney and its capsule by Stahr and the demonstration of specific tuberculous lesions in the capsule by Israel, Albarran, Kidd, and Kelly have led these men to recommend a removal of as much of the fatty capsule as possible. The danger of injury to the peritoneum with resulting tuberculous peritonitis is obvious.

The many different ways of treating the ureter which have been advised is proof that the ideal method has not been obtained.

The methods of severing the ureter have been varied. The end of the ureter may be crushed with a heavy forcep and cauterized with carbolic or iodine. Others prefer to burn through the ureter very slowly with the actual cautery. Schlaginweit demonstrated that occasionally special treatment was not necessary. In several cases he simply cut the ureter off and allowed it to retract, and these cases ran a usual post-operative course.

Taddi has shown in animal experiments that the ureter closed more quickly when it was not ligated. When it was ligated, hollow spaces formed in the walls resembling true cysts. There was never a trace of reflux of urine into the wound. Therefore in nonseptic conditions, he advises against ligation of the ureter. One would not feel justified, however, in applying the results of Taddi's animal experiments in his own clinical cases.

The treatment of the ureteral mucosa has been quite as varied as the methods of severing the ureter. Kuenmell uses a special thermo-cautery which is introduced into the ureter, while Albarran, Tuffei, and others sear it with heat. Israel prefers the injection of pure fluid carbolic acid into the lumen of the ureter, filling up the entire ureter and Koenig injects tincture of iodine. In order to bring about an early healing, Paschkis advises that the stump be given anti-tuberculous treatment after the operation. Suture of the stump to the skin was advised in order that the ureteral mucosa could be treated directly, and to prevent infection of the wound with tuberculosis, and fistula formations. Israel in his analysis of 1,023 cases, obtained figures showing that fistula occurred in 10 per cent of cases in which the

ureter was allowed to drop back into the wound, whereas sewing the ureter into the wound was followed by fistula in 16.3 per cent of cases.

Total extirpation of the ureter to the bladder or to include a piece of the bladder wall, was advised when nephrectomy was first recommended, but due to the increased mortality rate, it soon fell into disfavor. These procedures were recommended by Alessandri, Garceau, Giorgani, Ramsay, Kelly, Reynolds, Israel and Longard. Of these Longard has more recently recommended the following technique. The kidney is exposed by the usual lumbar incision; after the vessels have been ligated and the kidney freed, the ureter is freed down to the pelvis, and a second incision is made parallel and close to Poupart's ligament. The incision is carried through the muscles to the peritoneum; the kidney and attached ureter are pulled through this incision; after which the ureter is divided and then fixed into the wound.

The exact diagnosis of the ureteral conditions in surgical kidney is often difficult and perhaps impossible, even with the assistance afforded by the later methods of investigation. However, in certain cases, even though the pathology of the ureter may not be entirely plain in the mind of the investigator, enough is certain to justify the operation of combined ureterectomy and nephrectomy.

This was found to be true in the cases to be reported, and although not all were infected with tuberculosis, in each the ureter was badly diseased and would undoubtedly have been the cause of a slow healing sinus, following nephrectomy.

Formerly this was a formidable and rather dangerous procedure, but, as now carried out, the risks to the patient, both as regards function and life, are very much reduced. It is surprising the small amount of shock there is attendant upon operations on the kidney or ureter, and it is surprising how rapidly these patients get well. In my limited experience, the dangers of the combined operation have not proven greater than either of the single operations.

The combined operation recommended here may be begun either upon the kidney or the ureter, depending upon the necessities of the particular case. If the kidney is first attacked, it is exposed through the usual oblique incision, and is thoroughly freed of its attachments down to the brim of the pelvis and the kidney and ureter are dropped into the wound, closed either in layers or by through and through sutures.

The patient is now placed in the dorsal position and through a lateral rectus incision the peritoneum is exposed and deflected toward the mid-line until the ureter comes into view. The ureter is then stripped down to the bladder where it is ligated, divided, and the ends cauterized with phenol. It is now easy to free the ureter up toward the kidney until the kidney and ureter can be delivered through the lower wound. The wound is then closed without drainage, or at the most with a soft rubber drain, according to the judgment of the operator.

Sometimes it will be desirable to reverse the foregoing procedure by first doing the ureteral dissection in front; closing the wound, and then pro-

* Read before the San Francisco County Medical Society.

ceeding with the kidney operation, eventually bringing the kidney and ureter out through the loin wound. The latter order is preferable when the kidney contains pus, and liable to rupture under any unusual manipulations, or when the mass is so large that it cannot be easily delivered through the anterior wound. At the conclusion of such a combined uretero-nephrectomy, the patient, of course, has two wounds, but there is a broad plane of abdominal wall between the two incisions that has not been cut and which acts as a splendid support, militating very strongly against a hernia.

CASE 3746: Age 36. Housewife.

HISTORY: Apparently well until four months ago, when she began having frequent urination. The frequency has increased and now she has incontinence so that she is wet most of the time. Very little pain. Does not have night sweats, but has lost eight pounds in weight.

DIAGNOSIS: Left renal tuberculosis. Tuberculosis of bladder.

OPERATION: The kidney was exposed by the usual oblique incision and easily freed from its capsule. The vessels were tied individually. The ureter was very thick and it was thought best to remove it along with the kidney. The ureter was freed down to the brim of the pelvis and then the kidney and attached ureter were dropped in the wound and the wound closed without drainage. With the patient in the dorsal position, a left rectus incision was made and the ureter exposed extraperitoneally. The ureter was freed down to the bladder where it was ligated, divided and the ends cauterized. The kidney, with the attached ureter, was delivered through the lower wound and the wound closed with through and through sutures, and a small rubber dam drain.

Examination of the specimen showed many tubercles in the kidney and also in the ureter. There was practically no drainage, so the drain was removed on the third day. Both wounds were healed on the eighth day and the patient left the hospital on her fifteenth day, feeling well.

CASE 3330: Age 43. Male.

HISTORY: For seven months has had pains in the left loin with frequent and painful urination. Pus and blood in urine.

DIAGNOSIS: Left renal tuberculosis. Left ureteritis. Bladder tuberculosis.

OPERATION: The lower end of the ureter was first dissected free, ligated, divided, and cauterized. The cut end of the ureter was covered by a finger cot; dropped into the wound and the wound closed without drainage.

A left nephrectomy was then done and the ureter and kidney brought out through the loin wound. Wound closed without drainage. Both wounds healed by first intention and the patient was up in fourteen days, leaving for home in the country on his twenty-first day.

CASE 2772: Age 42. Widow.

HISTORY: Nine years ago had stone removed from the bladder. Four years ago diagnosis was made of stone in the left kidney. Fairly well until two months ago, when pain began in the left side.

DIAGNOSIS: Stone in left ureter. Dilated ureter. Pyonephrosis.

OPERATIONS: The kidney was first freed and the vessels ligated, leaving kidney and ureter attached. Wound closed after replacing the kidney. Lower end of the ureter exposed in the manner described above, and dissected free. During the manipulation the ureter was torn across well down toward the bladder. The kidney and ureter were removed and, with the finger in the vagina, the end of the ureter was lifted up so that it could be taken off close to the bladder.

The wounds both healed readily and the patient left the hospital on the eighteenth day.

CASE 2854: Age 23. Female.

HISTORY: Recurring attacks of left loin pain from

age of 12 years. Operated upon four years ago and a stone removed. Does not know from where. One year ago a second operation was done and since then there has been present a left ureteral fistula.

DIAGNOSIS: Fistula of left ureter. Stone in left kidney.

OPERATION: An attempt was made to close the ureteral fistula, but when the fistulous tract was dissected down to the ureter, the latter was found very much narrowed toward the bladder and the upper portion was greatly dilated so that the finger could be introduced well up toward the kidney. The ureter was ligated and divided and the wound closed. The patient was then placed in the nephrectomy position and the kidney and ureter removed intact. She left the hospital for home on the thirtieth day and both wounds were completely healed.

CASE 3299: Age 65. Female.

HISTORY: Pain in right loin with frequent urination for two months. Septic condition developed with fever.

DIAGNOSIS: Carcinoma of bladder. Right pyonephrosis. Dilated right ureter.

OPERATION: Because of the toxic symptoms from the pyonephrosis, it was thought best to remove the kidney and ureter. The kidney was freed in the usual manner and the wound closed. Through the lateral rectus incision, the ureter was identified; but in trying to free it, the ureter was torn very close to the bladder. The ureter and kidney were removed through the lower incision. It was impossible to ligate the short torn end close to the bladder, so a drain was put in and the wound closed. On the thirty-first day the patient left the hospital with both wounds healed.

CASE 3800: Age 27. Married.

HISTORY: Pain in right back, frequency and incontinence of urine. Duration 6 months.

DIAGNOSIS: Dilated right ureter. Dead right kidney.

OPERATION: Right rectus incision. The dilated right ureter was exposed extraperitoneally and dissected free down to the bladder. Lying alongside of the dilated ureter was a second ureter which was much less than normal size. This second ureter had not shown up in the x-ray, when the bladder was distended with sodium iodide and the orifice had not been observed at the time of the cystoscopy. The small ureter was ligated, cut and both ends cauterized with phenol.

The dilated ureter was ligated, divided and the ends cauterized with phenol. The stump attached to the bladder was then invaginated by a purse string suture of pagenstecher in the same manner that an appendix stump is invaginated. The wound was then closed with silk worm gut sutures and a small rubber dam drain left in.

The patient was then placed in the kidney position and the kidney with the attached ureters removed in the usual manner. The kidney was badly diseased, there being very little kidney tissue left. The small second ureter had a tiny pelvis of its own which was separate from the main pelvis.

The kidney wound was closed without drainage. The patient made a rapid recovery. Both wounds were entirely healed and the stitches removed on the eleventh day.

Examination one month later showed healthy scars, clear urine and the patient had gained eight pounds.

The cases reported here are too few to afford ground for generalization. However, taken in connection with other reports that have appeared in the literature, it would seem: (1) The combined operation adds but little, if any, to the surgical risk of either nephrectomy or ureterectomy; (2) The chances of a slow healing sinus or a fistula are lessened; (3) If the foregoing observations prove well founded in the experience of others, it is probable that the combined operation should be done more frequently, especially in cases of renal tuberculosis.

PERINEAL AND SUPRAPUBIC PROSTATECTOMY AND CHOICE OF OPERATION IN TYPES OF CASES *

Chairman's Address, Section on Urology

By ROBERT V. DAY, M. D., Los Angeles

Since Goodfellow, in 1893, performed the first perineal prostatectomy and Freyer, in 1900, the first sub-total enucleation suprapubically, progress has been rapid and constant, until at the present time both operations may, in the majority of cases, be completely visualized and, in a large measure, ordinary surgical principles observed. One difficulty after another has been surmounted. Preparation, the most important factor of all, is now among urologists universally the great desideratum. Technique and management have been so perfected in both types of approach that, in experienced hands, the incidence of mortality and morbidity should be very low. When Young, in 1903, modified and perfected the Proust operation, he builded so well that the various modifications (Himman, Geraghty, Dillon, Cecil, as well as modifications suggested by Young himself) have added little of real value to the original procedure. The average mortality rate by the perineal route in the hands of the foremost operators has been about 4 per cent (Young). The incidence of morbidity, however, has been somewhat greater.

The shortcomings of the perineal operation are: (a) Incomplete removal; (b) Various degrees of incontinence following; (c) Decrease or loss of sexual power; (d) Recto-urethral fistula—rarely seen except after operation by the inexperienced.

Incomplete removal is often followed by residual urine and occasionally by a certain degree of incontinence. Incontinence is more apt to follow one of the newer procedures—enucleation en masse even though the external sphincter is not injured. There can be no question that the sexual power of the individual is very often markedly lessened or destroyed by this type of approach. This has been attributed to injury of the periprostatic nerve plexus, and is also probably due at times to injury of nerves in the perineum. One is inclined to dismiss this factor as unimportant; but the loss of all sexual desire frequently has a profound psychic effect on men around 60 to 65 years of age. Recto-urethral fistula can almost always be avoided. Admittedly, and, in fact, all the bad results above mentioned do occur with even the most skillful and experienced operators.

Suprapubic prostatectomy, either by the two-stage operation or the one-stage open visualized operation, after the method first suggested by Hurry Fenwick, improved and perfected by Chute, Judd, and Hunt, in which bleeding vessels at the bladder-neck are whipped over and tied, followed or not by the use of a hemostatic bag, in properly selected cases, affords practically as low a mortality as the perineal operation, and the functional and structural results are not left to a certain chance as they are by the perineal operation. Incontinence is unknown after a proper suprapubic enucleation, and the gland

can be readily enucleated more radically, enabling the bladder to empty itself completely. Sexual function is not affected adversely.

Many operators (Gardner, Hunt, Bugbee, Lower, MacKenzie and others) have reported a large series with a mortality rate of 2 to 2½ per cent. In fact, with good fortune Gardner and Lower had more than 100 consecutive cases without a death, and Hunt and Judd over 100 with one death, using sacral and perisacral anesthesia and field-block for the abdomen. Freyer had an operative mortality of 5.25 per cent in his series of 1625 cases, and most of these at a period when accurate methods of determining kidney function and retained nitrogen were unknown. When we consider this low mortality, however, by either type of operation, we must believe that these cases were largely among the better risks—well-to-do patients for the most part, who did not allow the prostatism to advance to the ultimate. Probably Chute's recently reported mortality rate of 10 or 11 per cent is more nearly the correct one for patients operated on in general hospitals supported by taxpayers, where patients so often go only as a last resort. These patients often present themselves to these hospitals in the late stages, after the kidneys, heart, and other organs have suffered the most marked degeneration from retention, back-pressure, and long-existing infection.

Studying the statistics of many operators, either published or learned by personal communication, leads to the conclusion that perineal prostatectomy has a slightly less mortality rate than suprapubic when each is performed in the most skillful manner after the most careful preparation.

From 15 to 35 per cent of patients suffering from prostatitis coming to operation—the percentage in a given series varying with social status, financial state and degree of intelligence—constitutes the class in whom we may expect our largest mortality. These come with all sorts of lesions and degenerations in heart, kidneys, arteries, lungs and other important organs, and any ill wind may carry them off. In fact, if they survive prostatectomy, their expectancy of life is not more than one to three years. On the other hand, the remaining 65 per cent or more are excellent risks and if carefully prepared, have good surgery and are wisely managed post-operatively, should recover almost to a man, no matter what type of operation is performed.

Recently we have been segregating our cases as follows: The good risk we have subjected to suprapubic operation, either one-stage with bladder-neck suture plus hemostatic bag or packing, or the two-stage operation if catheter is not well tolerated or the urine is persistently ammoniacal from infection with urea-splitting organisms or stone is present. Packing the bladder after the manner of Freyer after the two-stage operation is occasionally resorted to and is entirely dependable to control bleeding. It is productive, however, of much tenesmus.

With the poor risk, on the other hand, we have recently decided, in most cases, to operate by the perineal route. With caudal and transsacral anesthesia, or even with gas, it allows them to get about

* Presented at the Fifty-second Annual Meeting of the California Medical Association.

very soon, and this is an important factor in many of these decrepit old men, who develop pulmonary, cardiac and renal embarrassment most readily.

Limited time does not allow me to discuss in detail the well-established methods of management from the moment the patient is first seen until he is fully convalesced.

The above-stated opinions are based on more than 200 prostatectomies performed by myself, about 20 per cent of which were done perineally. There has been no death among the perineal cases since the days of 'phthalein. In private practice my mortality rate after suprapubic prostatectomy has been 4.3 per cent and this, notwithstanding that until recently all the bad risks were done suprapubically in two stages.

CONCLUSIONS

1. Sixty-five per cent or more of patients requiring prostatectomy are good risks and have a reasonable expectancy of life from 4 to 20 years.

2. Operative mortality rate in this selected class of cases should not be more than 1 per cent from either type of operation.

3. Choice of anesthetic is a great factor. Mortality has shown a considerable drop with the introduction and use of caudal and transsacral or gas anesthesia for perineal operations and caudal and transsacral plus field-block in suprapubic operations or the use of spinal anesthesia.

4. From 15 to 35 per cent of any given series are poor risks, and the mortality rate is probably at least twice as great in these cases with the suprapubic route as it is perineally. These cases have a reasonable expectancy of not more than 1 to 3 years at best, and should be satisfied to take the chance of an occasional bad functional result.

5. On the other hand, the younger and sounder man with a reasonable expectancy of a considerable number of years to live and vitality sufficient to withstand a more radical and precise suprapubic enucleation, with sure preservation of sphincter control, no diminution of sexual power and no risk of having a urethrorectal fistula, I believe, should have the suprapubic operation in all cases. Bad results after suprapubic operations should not occur; but if they do occur, they are easily corrected. Most bad results after perineal operations are irremediable.

DISCUSSION BY GRANVILLE MAC GOWAN

Dr. Day's presentation of the dangers attending and the benefits to be expected from employment of the usual methods of getting rid of the obstructive and irritative interference to urination in cases of prostatism has the advantage of the clearness of vision arising from an unbiased mind and a wealth of observant experience.

The desideratum is that no surgeon should allow himself to become a fighting partisan for the operation of Mr. Him or that of Professor Who. The fact that these different techniques exist and that most men upon whom they are used make satisfactory recovery from their embarrassing ailments, speaks well for all of them. If it be but known, each has its definite cases to which it is best fitted. To select these cases is an art not of universal possession. The mortality rate of any operator depends not only upon his technical skill as a surgeon, including an intimate and exact knowledge of the anatomy of the perineum in the male, but

that of the fascial bed in which the bladder is found lying when it is approached from above, and of the interrelations of the organs of the pelvic basin. On the watch for the dangers which lurk and cower to spring upon the unwary from Scylla above or Charybdis below, free of the pride of the egoist who jeopardizes with nonchalance the interest of his client, by sacrifice of accuracy to speed—if the surgeon knows enough of medicine to properly prepare his client for the ordeal of operation and to carry him through the subsequent storm without too much meddling, in private practice the mortality rate should not exceed 2 per cent, whether the approach to the prostate be from above, visualized or not, one stage, two stage; or a Young's perineal prostatectomy from below, with or without drainage. The nature of the malady is such that the ultimate result is not always entirely satisfactory to either the operator or the patient, but a greater mortality in private hospitals nowadays than 2 per cent is attributable only to lack of skill, lack of care, or unsound judgment upon the part of the operator. It is my belief and my claim that no risk is ever added in the case by a preceding suprapubic operation for preliminary drainage, the bugaboo of some writers, that a little surgical care, easily learned and simple to carry out, can make as innocuous and foolproof as any process in surgery can be made. No man should ever lose his life from an operation required for suprapubic drainage, from the operation itself.

Brack Shops Building, Los Angeles.

ACKNOWLEDGMENT OF REPRINTS

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PERITONSILLAR ABSCESS.

A LESS PAINFUL AND MORE EFFICIENT
METHOD OF TREATMENT *

By ROBERT STEELE IRVINE, M. D., San Francisco

There are few physicians doing general or special practice who do not at times have to deal with peritonsillar abscess—this frequent complication of an exceedingly common disease. Its painful course and occasional fatal termination are too well known to require comment, which facts give me courage to suggest a method which I have found successful.

It is not my intention to enter into a discussion of the pathological process leading to abscess formation. There seems to be an agreement that it begins with a bacterial infection, localizing in the tonsil itself, then spreading by way of the lymphatics into the areolar tissue surrounding it or lying between its capsule and the aponeurosis of the superior constrictor of the pharynx. The pharyngeal muscles, palato-glossus ventrally, the palato-pharyngeus dorsally and the superior constrictor of the pharynx laterally by enveloping the tonsil on three sides, limit the process, which finds least resistance by dissecting the tonsil with its capsule from its bed, pushing it towards the median line.

According to Coakley, abscess may form in four different localities: (1) External to and above middle of tonsil; (2) Behind posterior pillar; (3) Superficial to constrictor muscle (pharyngo-maxillary space; (4) Multiple locations. He has also stated that 90 per cent of the abscesses are of the external superior type.

The type which burrows laterally, piercing the superior constrictor muscle and localizing in the pharyngo-maxillary space, is necessarily most grave owing, first, to its inaccessibility; second, its immediate connection with the mediastinum, and third, the fact of the great vessels of the neck lying in its posterior compartment. The unmolested or unsatisfactorily drained cases, which terminate fatally, are probably of this type.

The clinical picture of a fully developed peritonsillar abscess is one of extreme distress. The dysphagia, obstructed respiration, dribbling saliva and general wretchedness can scarcely be misinterpreted and the patient is generally willing to submit to any measures for relief. It is often impossible to open the mouth sufficiently to examine the throat. If the jaws be forced open, the soft palate and uvula appear oedematous and the swelling pulls the anterior pillar of the affected side to or across the median line, which makes definite localization most difficult.

If left to itself several courses are open: It may in a few hours rupture spontaneously, usually between the tonsil and anterior pillar. The literature speaks of sudden rupture and suffocation. I am not able to state how often this has occurred. It may erode a vessel and produce a fatal hemorrhage. In 1911 Newcomb collected records of thirty-five such cases. Since then several others have reported hemorrhages occurring after drainage. Occasionally, if the abscess be not too large

or virulent, it may become quiescent or be absorbed. I have occasionally encountered such abscesses in doing tonsillectomy.

In going over the text books of general and special surgery to which I had access in the Lane library and the American and European literature of the last twenty years, I found numerous references on this subject. There is a general agreement that the abscess should be opened as early as possible. A variety of methods were described: one recommends a general anesthetic and enucleation of both tonsils, beginning on the affected side. He reports fifty-six cases so treated, with three fatalities, one of which he believes should be omitted from the statistics.

Most authors advise spraying or swabbing the throat with cocaine and incising with a bistury, free, or protected to near its point (according to St. Clair Thomas), on a line from the base of the uvula to the last upper molar, slightly nearer to tooth than uvula. The direction of the incision is variously described as vertical, horizontal, toward uvula, and toward cheek. The insertion of forceps to increase the size of the opening was the method of choice by several. Hays devised a combination of forcep and canula by which he opens and irrigates immediately. The galvanocautery and the grooved director have been used and the cavity has been kept open by packing, rubber tubes and a cleverly constructed "Knopf" tube shaped like a collar button. While with these methods many patients have been relieved, there certainly are tremendous technical difficulties in the way of locating the best point for drainage with locked jaws and a tender throat; and considerable pain and danger connected with a quick and uncertain stab toward the swelling. Often the knife penetrates the pillar and enters the tonsil, there is free bleeding but no pus is obtained. The surgeon assumes that the abscess was not matured and later the pus finds its way out and the patient is relieved, but not because of accurate surgery.

Frederick Schenech cites an instance of a French woman of the seventeenth century who developed an abscess about the tonsil, and notwithstanding her anxiety to be relieved, would submit to operation by no one except her fiancé. Accordingly, he took his position before her, knife in hand, she was blindfolded, and at that instant the knife was handed to the surgeon who stood at his side and plunged the knife into the swelling, only to see her sink to the floor and die from hemorrhage in a few minutes. It was Professor Killian, I believe, who said: "Das skalpell ist blind."

It occurred to me that an operation performed under a momentary general anesthesia with a blunt pointed instrument, following the anatomical cleavage lines, would be more in keeping with modern surgical methods. I have, therefore, carried out the following technique in fifteen instances, with most satisfactory results as to freedom from pain, rapid convalescence, and minimum injury to adjacent structures. It is preferably performed in a hospital.

The method in brief is as follows: The patient lies with face turned toward affected side (if it be unilateral), a small mouth gag is placed between the teeth and complete anesthesia is

* Read before the San Francisco Polyclinic Staff.

induced by somnoform or nitrous oxide. The anesthetic mask is then removed, the jaw is quickly opened by mouth gag, the position and type of abscess determined by a palpation with the finger, a sponge on holder is placed behind the swelling and a blunt tonsil scissor, curved to a right angle, is passed between the tonsil and the anterior pillar and the abscess cavity entered. The scissor blades are then opened as widely as necessary to evacuate the pus, which is prevented from entering the larynx by the sponge and by the voluntary action of the patient, who by this time is sufficiently awake to clear the throat. If pus is not obtained at the point of entry of the scissor blade, it is proper to search with the blunt point until it is encountered. Tonsillectomy is performed two or three weeks later.

To summarize: the points of advantage of this method are: (1) Accurate localization of abscess; (2) Maximum safety and thoroughness in evacuation; (3) Minimum damage to pillars and palate; (4) Absence of pain during operation.

209 Post Street.

Intracutaneous Guinea-Pig Test (Kellogg) for Human Susceptibility and Immunity to Diphtheria—

The Kellogg test consists in the injection into the skin of a white guinea-pig of a mixture of equal parts of blood serum from the person tested and a toxin dilution containing one-thirtieth of the L + dose per cubic centimeter. If the patient's serum contains exactly one-thirtieth unit of antitoxin for each cubic centimeter (the amount stated by Schick as being protective), 0.1 c.c. will contain one-three hundredth unit of antitoxin. Two-tenths cubic centimeter of the mixture of serum and toxin will, therefore, contain one-three hundredth unit of antitoxin and one-three hundredth L + dose of toxin. The combining ratio of these substances is such that there will be free in the mixture one-three hundredth minimal lethal dose of toxin, which is just sufficient to produce redness without necrosis in the skin of the guinea-pig. This degree of reaction, as also anything less, constitutes a negative result and indicates immunity. Tests were applied by W. H. Kellogg, Berkeley, Cal. (Journal A. M. A., March 17, 1923), in combination with the Schick test, on 160 persons, in four different groups, each group being tested at one time by the two methods. With two exceptions, the Schick test and the Kellogg test in this entire series of 160 persons tested have agreed so far as uncomplicated Schick tests were concerned. Kellogg is convinced that the Kellogg test is conclusive as showing either the presence or the absence of immunity to diphtheria. Controls are possible which guard against deteriorated toxin and false negative reactions. False negative reactions with the technic described are believed to be an impossibility. Protein reactions do not occur. The test is a central laboratory one, relieving the physician of the responsibility for the interpretation of the doubtful reactions so frequently observed in the Schick test. The test is the one of choice for practitioners having occasion to test a few persons at a time. The disadvantage of the Schick test, under such circumstances, is that no control against false negatives from deteriorated toxin exists. The test is not recommended as a substitute for the Schick test, when large groups are being examined, for the reason that the collection of a large number of blood specimens would be too time consuming, excepting with adults and older children with whom venipuncture can be used.

ALLERGY AND ANAPHYLAXIS OF THE SKIN *

By GEORGE D. CULVER, M. D., San Francisco

The phenomena of immunity and anaphylaxis, as manifested by skin reactions like urticaria, the circumscribed oedemas, purpura, and possibly some of the eczematous eruptions following duplicated infections or the ingestion of a foreign protein where previous hypersensitization has occurred, are familiar to every physician. Macleod gives as clear an explanation of anaphylaxis of the skin as I have found. With vaccine as an example of a foreign substance added to the blood for the purpose of immunization, an ergin is produced after a time. This hypothetical substance in the form of the so-called agglutinins precipitins or bacterioly-sins, all antibodies, is responsible for the anaphylaxis. When a second dose is given, the antibodies cause its disintegration so rapidly that toxic products are formed which lead to an acute reaction. A foreign protein of food may act similarly, and as Walker states, one may have eaten the especial food for years with no disturbance whatever, then may come a time when some skin disturbance is produced, and ever after that, associated with the eating of that article of food a repetition of the skin manifestation occurs. Other symptoms of general character may also be produced, such as fever, mucous membrane oedema, and joint pains. Von Pirquet coined the word "allergy" as designatory of such a clinical picture. The skin in such instances is allergic.

Idiosyncrasy against drugs has been explained by the deduction that the introduction of the drug into the body leads to the formation of albuminoid bodies which act as alien protein substances.

Along with the subject of focal infection as being at fault for many skin diseases, idiosyncrasy has had almost an even break. It is not difficult, however, to find a wide divergence of opinion among the most active and successful clinicians. Near the closing of one of the best of recent publications on dermatology, that of Darier so ably translated by Pollitzer, the latter offers the statement that, "The divergence among competent dermatologists on so apparently simple a question as the value of a non-nitrogenous diet in psoriasis and some other dermatoses is certainly remarkable and suggestive. In regard to urticaria, oedema-circumscriptum and similar affections which seem to be typical of an anaphylactic disturbance, how often does the most rigid inquest fail to disclose the peccant alimentary or autotoxic substance! The recently introduced 'cutaneous tests' that in theory seemed so promising have proved disappointing in practice."

Hazen remarks that, "Sensitization to some food protein is on the high road to popularity, and for the next few years we shall doubtless have an exhibition of thousands of cases diagnosed by some food test, usually of the cutaneous type, and cured by either immunization with minute doses of the food or by abstinence from it altogether. While

* Read before meeting of San Francisco County Medical Society, March 13, 1923.

we must remember that cutaneous tests may be important, let us not assume that such tests can take the place of all other diagnostic methods."

Norman Walker, in the last edition of his delightful little book, "An Introduction to Dermatology," makes the statement that: "The cutaneous reactions which so many workers are at present investigating are full of promise for the future. We are only on the threshold of the subject, and the results are often mystifying and not infrequently seemingly contradictory; but I feel very confident that as time goes on and experience accumulates, we shall learn what not to give to patients who suffer, not only from urticaria, but from many other forms of dermatitis." The carrying out of the test is easy; interpretation requires experience.

More than two hundred of these test proteins have been prepared; also grouped protein tests. The forearm is cleansed with ether, excoriated, and on each excoriation a drop of decinormal sodium hydrate solution is placed. Then a small quantity of the proteins, whose action one is anxious to note, is rubbed into each abrasion with a platinum loop, flamed before and after each application. Controls are made with the soda solution alone. In from ten to thirty minutes, the reactions should be read. They consist of wheals and surrounding erythema. A wheal without erythema, and no larger than the wheal produced on the control excoriation, is "negative." A wheal half as large again as the control wheal, and surrounded by erythema, indicates a positive reaction, and there are degrees of positiveness. The assessment is somewhat arbitrary, according to the size of the wheal and the intensity and area of the erythema.

A positive reaction produced by any particular protein indicates that the patient has been sensitized to that particular protein by absorption of it from some focus in his body.

Walker also states that, "Again and again he has seen patients dieted, drugged, and sent in search of health to one health resort after another when the whole explanation was that some simple article of diet had become a poison."

I have not been so fortunate as to make many such discoveries. My own impression is that instances in which allergenic or anaphylactogenic skin effects, as seen in a dermatological practice, caused solely by some individual and discoverable foreign protein are more remarkable for their rarity than otherwise. When found, in almost every instance, the clinical picture is spectacular, and it presents points of interest that make it a memorable one. It is all very wonderful in theory, and there isn't any doubt of its occasional dramatic manifestation.

Robert W. MacKenna, in his publication just off the press, very aptly remarks:

"It will be readily understood that in the doctrines of focal sepsis and sensitization to foreign proteins we may have found a clue to the etiology of many skin conditions whose precise cause has hitherto been obscure. But caution is necessary.

We must not be too ready to explain all conditions that baffle us by appeal to biochemical reactions that in themselves are obscure and still the subjects of controversy. But by exact observation and the careful accumulation of facts, we may ultimately reach certainty."

One of the most extensive and alarming instances of erythema multiforme I have seen was a repetition of a similar attack which likewise followed the use of Neisserian vaccine. I recall the plaint of an intelligent patient who was suffering from malaria that he should not be given quinine. True to his prediction, an oedema circumscriptum with rather alarming mucous membrane symptoms developed soon after a few small doses were given. Drug idiosyncrasies are not uncommon.

I've had occasion to watch most intimately an individual in whom the eating of tomatoes was invariably followed by canker sores of the tongue-tip during one whole season. Then for several years this did not occur, but this last season the phenomenon repeated itself as before. What conclusion, aside from the advisability of leaving tomatoes alone, should one reach?

Though such articles of food as shellfish, berries, etc., cause urticaria in some individuals, and though these may in some way cause other types of skin manifestations, the question arises, Has the person affected been rendered anaphylactic? Such an instance as the following may be explained in such manner:

Patient while dieting ate much meat. During the dieting a dermatitis, eczematous in character, developed in the front of the neck; this disappeared. A few months later, while on a similar diet, the skin of the front of the neck became tender and red. From this time on the eruption fluctuated without any apparent tangible reason. A year later while absent from home this patient gave up meat, and within a few days, while on a bread and vegetable diet, was much more comfortable. After returning home and eating lamb, there was a return; then while on a subsequent trip during which time only chicken and venison were the meats eaten, there was freedom from the dermatitis. Again, on returning home, and this time partaking of beef, there was a return. This patient found that beef or mutton could be eaten three or four times, but not longer without an outbreak. This is clearly a case in point of what we believe to be an acquired hypersensitiveness to the proteins of beef and mutton, probably a true anaphylactoid reaction.

How can the following be explained? A man twenty-four years of age sought treatment in August of last year for a recurrent dermatitis, largely of the type of eczema seborrhoicum, which had appeared periodically for five years, and was often associated with furunculosis. No doubt, streptoderma was frequently associated as an aggravating factor in the dermatitis. This, however, with the furunculosis, seemed secondary to the dermatitis of indefinite and puzzling etiology. The patient had an appendectomy in 1916, one year

preceding the first appearance of trouble with the skin.

While still a student in the East and under the care of different excellent men, many tests for sensitiveness to foreign proteins were made. His skin was found to react conclusively to lima beans, peas, and cologne, and to nothing else. He refuses to accept the casual relationship of cologne. A hunt for a cause is still being made. In the meantime the condition is kept under control only while the patient follows the most careful daily regimen of living.

A patient of recent date gave a history of having had chronic recurrent urticaria for five months, principally about the buttocks, thighs, and lower abdomen, with swelling of the lips. When he came in, the left side of the upper lip was swollen. Four months later he again presented himself, at which time he was free from any disturbance. He had observed in the meantime that most of the green vegetables, cooked or raw, caused an outbreak. Fruits, however, and tomatoes did not do so, nor was he affected by potato. Dry beans and canned peas were great offenders, but wheat was not so. He chewed much tobacco and smoked a little, but this vegetable did not cause trouble.

If this patient is an example of an anaphylactoid tendency—and I believe he may be—there must be an intricacy difficult of explanation. The case cited, with an anaphylaxis toward mutton and beef, was not anaphylactic to meat as meat, nor to one kind only.

I am at a loss to offer anything conclusive. Such work as that of Arthus, Barnathon and Nobecourt, showing that sensitization to a foreign protein may be produced by the absorption from the alimentary tract of proteins incompletely hydrolyzed because of some digestive irregularity, must be carefully weighed. And we must accept as a working basis that foreign proteins in the blood may establish what is known as an anaphylactic state. The patient is sensitized, and his skin is rendered allergic; i. e., made ready to react to the local inoculation of the protein to which the person is sensitized.

Much has been written upon the subject. How great a percentage of instances of urticaria, giant urticaria, and the dermatitides can be explained upon an allergenic basis, or whether or not all can, no one knows. With such a highly organized part of the body as the skin, which is so intimately linked with the digestive and nervous systems, and which is so greatly influenced by the endocrine secretions and by conditions of the fluids circulating in the blood-vessels and lymphatics, almost no phenomenon is too intricate to believe possible.

323 Geary street.

NITROUS OXID ANESTHESIA IN INDUSTRIAL SURGERY *

By H. G. McNEIL, M. D., Los Angeles

Industrial surgery in its various divisions is a particularly exacting specialty, and as such must call to its aid all modern and scientific appliances which will assist in the prompt and painless recovery of injured employes. Its major work should be done in a good hospital and under the observation of a staff, which should be a teaching staff where such is available.

Those who have made the most careful study of this class of work and are oldest in it, I believe realize more and more that the name "industrial surgeon" is too broad a term, and that as time goes on this industrial medical and surgical work will be more properly cared for in hospitals which have an industrial staff with trained assistants. The growing importance of this class of work will soon make it incumbent on all hospitals to provide for it in a very special manner. Certainly, in this way only can the best results be obtained, as eternal vigilance is the price of success. There must be a minimum of poor results, as we are not dealing only with convenience or cosmetic effects, but with the future earning ability of our patients which, once destroyed, cannot be returned to them.

These patients, because they are being cared for under a compensation act, are sensitive and critical, which is a further reason why they should be given the most exacting care. The introductory work should be done with care and gentleness to obtain their confidence, and the subsequent attention made as painless as possible.

It is just along these lines that I wish to impress upon you the necessity of using every available means to treat these many painful injuries and dressings in the most painless manner. It has often been said that if every physician had to have one baby that the science of obstetrics would long ago have been the highest developed. So in industrial work. If each surgeon had to submit to the daily dressing of a third-degree burn he would at once look for the most harmless method of relief which at present seems to be nitrous oxid gas.

This gas, discovered by Priestly in 1872, was first used as an anesthetic by Horace Well in 1844. It offers us so much that it is hard to be over-enthusiastic in its use. Under its influence all kinds of long and tedious operations may be done with the greatest safety. Its value and place in general surgery is now well founded, but I do not believe it is as universally used in industrial work as its merits justify. It is not as toxic as either chloroform or ether, and the signs of asphyxia are so plain, distinct, and easily recognized that even one not experienced in its administration should be able to prevent a fatal asphyxia. Of course, the administration of any anesthetic should not be entrusted to a layman when the services of a physician can be obtained. And I insist on the anesthetist attending strictly to his own business. He should continually observe every detail of his work as closely

Health, longevity and intelligence are largely questions of heredity. Those medicos who are anxious to establish a medical autocracy, destroy the liberty of the subject, and legislate for the individual from the antenatal state to the grave, had better start with the ancestors.—(Sir James Barr, M. D. American Medicine, June, 1923.)

* Presented to Section on Industrial Medicine and Surgery at the Fifty-second Annual Session of the California Medical Association, San Francisco, June, 1923.

as the surgeon does his, and it is only by so doing that he can guide his patient safely through with the more toxic anesthetics and maintain a proper degree of anesthesia with gas.

The machines in use today are so simple and accurate that it is possible at all times to know almost the exact proportions of nitrous oxid and oxygen being given, and to change the mixture as the indications arise. We occasionally find individuals who cannot be anesthetized with nitrous oxid, and for these the machine is so equipped that ether may also be used. This is rarely necessary except in prolonged operations on plethoric or husky individuals. The amount of ether used in such cases never goes beyond the point of stimulation, so that the depressing nauseating effect of deep ether saturation with a prolonged recovery and danger of anesthetic poisoning is avoided.

While it may sometimes be considered a convenience in fracture work, it is a necessity, and only by its aid can we continually get the best results. I use it universally both in office and hospital practice where a short anesthesia is desired. The patient is usually awake and able to go to the X-ray room by the time the reduction is made and dressings applied. The plates can be viewed in a few minutes, and if the results are not satisfactory the process is repeated until we are satisfied even if it takes four or five attempts.

I know of nothing in surgery which is more pleasing than the satisfactory reductions of a difficult fracture, nor is there anything more distasteful than to acknowledge a poor reduction. Our results are what we make them, and the first efforts must be the best. Nature is very kind when she cures most of our diseases, heals our wounds, and unites our fractured bones, but she refuses to be responsible for their proper alinement.

Then there are those painful and time-consuming dressings which wear out the nerves of the patient and the back of the doctor. Shifting of splints, movement of ankylosed joints, dressing extensive burns, and drainage can all come under this heading and can be best cared for with the aid of gas. Here, as a rule, we use simple analgesia such as the dentist employs for filling teeth, the patient taking as much as he wishes through a nose-piece, which falls from his hand if he becomes unconscious.

It will be necessary to discuss the cost of the service, as that question is always brought up by those unfamiliar with the liberal use of this gas. The machine is as much a part of regular equipment as the office desk, and must be so considered in any modern office or hospital doing accident work. If results are what count, it will pay for itself in the first difficult fracture case, where a poor result would run compensation into hundreds of dollars. Proper first-aid treatment will often obviate the necessity of much massage and other corrective manipulations, which we find a necessary but burdensome part of our work. Material costs should run about \$1.25 per hour, which is not excessive for the first aid, and as subsequent needs are usually only for a few minutes at a time, the total

cost is not great and is even small when the relief afforded is a consideration.

In conclusion, allow me to state that I believe that more thorough work can be done and quicker recoveries secured when painless methods are employed.

939 Pacific Mutual Building.

The Alameda County Medical Association as Host to the American Medical Association—The Alameda County Medical Association on Monday, June 25, entertained over five hundred visiting Fellows of the A. M. A. and their friends, giving them a day they will long remember. After the morning clinics a genuine old-fashioned Californian barbecue was served in the magnificent Redwood Grove at the Claremont Country Club.

After the barbecue, came the drive over the famous Skyline Boulevard, called by Baedeker "the third most beautiful drive in the world." As you wind along these hills, 1500 feet above the city, you can see the whole stretch of the San Francisco Bay, from Vallejo to San Mateo, with the city of San Francisco and the Golden Gate directly before you. Through the tunnel and on over hill, and through dale, through the wonderful Mount Diablo country, and to the Mount Diablo Country Club, nestling at the foot of the grand old mountain from which it takes its name. Here were distributed baskets of California's choicest fruits, to serve as a dessert to the barbecue.

The return was made by way of the San Ramon and Amador Valleys, and through the Dublin Canyon, arriving in Oakland in ample time to return to San Francisco for dinner.

On Monday morning, June 25, the following clinics were held:

Fabiola Hospital: Pernicious Anemia, H. Z. Giffin, Mayo Clinic, Rochester, Minn.; Carcinoma of Descending Colon, Daniel Crosby, Oakland, Calif.; Demonstration of a New Fracture Table, W. L. Bell, Oakland, Calif.

Samuel Merritt Hospital: Urography as a Means of Urological Diagnosis with Discussion of Cases, William F. Braach, Mayo Clinic, Rochester, Minn.; Retroversion of the Uterus, S. H. Buteau, Oakland, Calif.

Providence Hospital: Tumors of the Breast, Jabez N. Jackson, Kansas City, Mo.; Methods and Results of Fecal Examinations for Intestinal Protozoa, Dr. Charles A. Kofoid, University of California, Berkeley, California.

On Tuesday, June 26, the following clinics were held:

Fabiola Hospital: Protein Sensitization as Cause of Disease, W. W. Duke, Kansas City, Mo.; Ulcer of Stomach—Diagnosis and Disease, Robert Coffey, Portland, Ore.

Samuel Merritt Hospital: Diagnosis of Diseases of the Gall Bladder, also Pictures of Gastric Ulcers, Max Einhorn, New York; Post-Operative Embolism, Charles A. Dukes, Oakland, Calif.

Providence Hospital: Osteomyelitis and Tumor of the Bone, Dean Lewis, Chicago; Treatment of Diabetes with Insulin, W. D. Sansum, Santa Barbara; Tuberculosis, Kennon Dunham, Cincinnati.

No movement has been developed in medical organization work of greater value than these well planned, organized and conducted diagnostic clinics. Every physician who attended the clinics in the Oakland hospitals, as well as San Francisco, expressed the greatest satisfaction with the results. Patients will secure better care and the cause of better medicine and public health be definitely advanced by making this movement, started at the California session, a permanent feature of A. M. A. meetings.

RADIOTHERAPY OF TUBERCULOUS LYMPH NODES*

By PHILIP H. PIERSON, M. D., San Francisco

Tuberculosis, even if it appears to be located solely in lymph nodes, the eye, ear, mouth, lungs, abdomen, genito-urinary system, or bones, must be considered as only the local manifestation of a potentially diffuse condition. And so when we turn our attention to the treatment of tuberculous glands, we must not forget the type of disease with which we are dealing and the reaction of the individual to this focus. Theoretically and practically, radiotherapy—and I will chiefly discuss x-ray—is particularly adapted to tuberculous glands, for it produces both a local and general reaction.

First let us consider the pathological histology of a tuberculous gland. The tubercle bacillus gains entrance to the cervical glands generally through the tonsils, lymphatics of the pharynx, or diseased teeth roots. The gland is the second line of defense. The growth of the tubercle within the gland structure is manifested by the attraction of lymphoid, plasma and giant cells, increase in the glandular tissue, and with the new blood vessels there is an increase in connective tissue within and about the gland. If the resistance of the individual is low in comparison with the virulence of the organism, the gland enlarges with this stroma and cellular structure. Nature's effort is to wall off and encapsulate the focus with connective tissue. The growth of this tissue shuts off the blood supply to the central portion of the gland and caseation takes place. In healing, this is replaced by fibrous tissue and ultimately calcification, or if resistance to the disease decreases it may, because of ferments within, break down and form a sinus. The anatomical importance of this defense zone is appreciated if we agree with some investigators—Van Zwaluwenburg and Grabfield among others—that one path of infection to the lungs lies from tonsil to cervical lymph glands and thence to apical pleura and lung. Apical pleurisy has been said to exist in 10 per cent of all chest roentgenograms, in 93 per cent of all cases showing tuberculous deposits in the faucial tonsils and in 59 per cent of those showing tuberculous cervical adenitis.

The reason for saying that radiotherapy, especially x-ray, is particularly adapted to the treatment of tuberculous glands is because glandular and lymphoid tissue in general is more amenable to the x-ray than is other tissue. To correctly understand x-ray therapy a few words should be said in regard to these rays. The range of wave lengths included in the term x-ray is greater than the total range of the visible spectrum—red to violet. The shorter x-rays, also termed hard rays, vibrate with greater frequency than the longer and softer rays. The hard rays penetrate to the deeper structures while the softer rays have more influence upon the skin. For treating glands, which in some instances lie a considerable distance, several centimeters, beneath the skin, the softer

rays must be cut out, and this is done by the use of aluminum filters. Consequently a dose of x-ray may be given to the deeper structures without the danger of skin burns. Another factor of considerable importance is that small doses stimulate the formation of connective tissue and favor the absorption of hyperplastic tissue, while large doses tend to destroy all tissue. As the object is to do what nature herself is trying to do, but in a shorter time, in general it is indicated to give these stimulating small doses of hard rays at shorter intervals—one to two weeks apart.

It is very natural to divide tuberculous glands into three groups, (1) the non-suppurating hyperplastic glands frequently found in children and very amenable to treatment, (2) closed suppurating or partly caseous lymphomas, and (3) open, suppurating, and partly caseous lymphomas. In glands that are purely tuberculous, while not as common in the cervical region in adults as in children, this form of treatment is most promising, and they should never be operated upon until x-ray, rest, and intensive hygiene have been tried. If with these small doses the central portion does soften, it will be very satisfactorily walled off, and a small incision or aspiration may be done to evacuate the caseous material. With continuance of x-ray even this gland will be replaced by fibrous tissue and only a small nodule will remain. If not unsightly and if completely enveloped, I think this residual left in the system may be a very beneficial factory for "auto-tuberculin." If at some later time it seems advisable to remove this small nodule, an almost insignificant scar will remain.

If presented with a gland, or group of glands, starting to suppurate, x-ray should be used first to wall off the gland, and so lessen the tendency to spread as the result of, or in spite of, the operation. The third type of lymphoma where little is left of the original gland and the sinus communicate with a mass of matted tissue, x-ray in stimulating doses destroys much of the granulating exuberant tissue and favors healing.

One criterion as to the success of radiotherapy as compared with surgery or tuberculin is the number of recurrences, local or in other parts of the body. Wolgemuth states that with hygiene alone about 24 per cent are permanently cured. Jones using tuberculin in 79 cases found that 27 were cured, 21 much better, 18 better, 8 not improved and 4 worse, and concluded that tuberculin was probably helpful when combined with hygiene, rest, good food, etc. Van Noorden reported 28 per cent of his surgical cases showed tendency of tuberculosis elsewhere, and Bos that 26 per cent developed phthisis, and 14 per cent tuberculosis elsewhere. Tichy compared 31 cases operated upon, among whom 26 per cent did not recur as against 74 per cent which did, with 27 cases treated with x-ray in which series 89 per cent had no recurrences and 11 per cent reappeared. In a small series of 20 cases treated with x-ray Fritsch found 8 cured, 10 materially improved and still under treatment, one relapsed and one died with general tuberculosis. Molyneux has used radium

* Read before the San Francisco County Medical Association, November, 1922.

and feels that the outlook with this form of treatment is so uniformly good that surgery and prolonged periods of rest are no longer necessary.

The chief difference between surgery and x-ray in the treatment of tuberculous glands is that, while at operation a considerable amount of the focus is removed, some tuberculous tissue is still left and the system is placed in a state of hypersusceptibility predisposing to a recurrence locally or elsewhere, while with radiotherapy the glands locally are shrunken and encapsulated and by this gradual stimulation "auto-tuberculin" is manufactured, thereby favorably influencing any focus elsewhere.

In looking over the cases we have had at Stanford treated by radiotherapy I find instances of tuberculosis involving glands in the following regions: Cervical, mediastinal (pointing in a cold abscess beside the sternum), a chain of tuberculous lymphatics extending from the mid-clavicle down almost to the breast in a woman showing no evidence of mastitis, and this I think is a very unusual location for tuberculous glands, axillary, and inguinal following genito-urinary tuberculosis. In practically all of them there was diminution in the size of the glands with increased fibrous tissue surrounding them. In the case of the lymphatics on the chest wall they were later removed because their pressure on the ribs caused distress. Another case of cervical glandular tuberculosis with an apical lesion has shown distinct healing in the lesion as well as locally. A very important complication in cervical tuberculous adenitis is a pus focus in the teeth or tonsils. As this secondary infection naturally drains into the same glands, its presence is a handicap in the healing of the tuberculous infection. Frequently certain glands in a group will subside and others will not and the latter will subside more quickly when the pus focus is removed.

Radiotherapy has been used by Hubeny and others in the treatment of the tuberculous tracheo-bronchial lymph nodes, but here we may cause a pulmonary fibrosis which is not advantageous. In treating children care must be exercised not to include the thymus or other internally secreting glands as a thymic death was reported in one instance.

In conclusion: The advantages of radiotherapy over surgery are, (1) a local as well as general beneficial effect is produced in all three types of glands, thereby always justifying its use in place of, or at least prior to, surgery; (2) the individual is not left in a state of hypersusceptibility by radiotherapy; (3) no anesthetic is necessary; (4) very little or no operative scar is left; (5) no pain is connected with the treatment; (6) less likelihood of extension and recurrence; (7) the individual can continue at work and thereby save considerably in the economic aspect of his illness. Its chief disadvantage is the time element, in that several months are generally necessary in adults, while less time is required in children. A word of caution is also advisable, (1) small doses of short rays properly filtered are preferable to the larger doses; (2) do not neglect general hy-

gienic treatment, for tuberculous adenitis is a local manifestation of a lowered resistance to a diffuse infection; and (3) be sure to remove pus foci which drain into the cervical region, for where there is secondary infection, radiotherapy is less successful than with pure tuberculosis.

516 Sutter Street.

Characterization of Various Forms of Endocarditis

The bacterial and the indeterminate groups of cases of endocarditis are discussed by Emanuel Libman, New York (Journal A. M. A., March 24, 1923). The indeterminate group consists essentially of two types of cases: (1) an atypical form of verrucous endocarditis, and (2) those cases usually described as terminal. By the atypical variety is meant the form of endocarditis in which the Aschoff body is said to be the characteristic lesion of the disease, the case being of rheumatic origin. Of cases clinically recognized as rheumatic fever and exhibiting at postmortem examination the typical verrucous lesions, only eighteen out of fifty-six exhibited Aschoff bodies. The clinical histories of the other thirty-eight cases made it clear that many of them at least were cases of true rheumatic fever. It is evident, therefore, that not all cases of rheumatic fever are accompanied by the specific lesion. Besides those cases that present the clinical picture of rheumatic fever and the typical verrucae on the valves, but not Aschoff bodies, there exists a group of cases presenting more or less the clinical picture of rheumatic fever (with perhaps a greater tendency to the occurrence of purpura and erythema), not showing Aschoff bodies at the postmortem examination, and accompanied by lesions on the valves which do not correspond to those usually found in rheumatic fever. Bacteria have thus far not been found in the vegetations of this group. It is possible that some of them represent unusual types of vegetation of rheumatic origin. In fatal proved cases of rheumatic fever studied by Libman, the tricuspid valve was involved in twelve of eighteen cases, or more than 66 per cent. Of fifty-six cases classed clinically as rheumatic and showing typical vegetations at the postmortem examination, but without Aschoff bodies, thirty-one were accompanied by vegetations on the tricuspid valves. In cases of acute bacterial endocarditis, the right side of the heart (tricuspid or pulmonary valves, or both) was found involved in fifteen out of fifty-six cases, or 26.8 per cent. The mitral valve was affected more often than the aortic, the same holding true of cases of subacute bacterial endocarditis. In cases of the latter disease, the right side of the heart was involved once (tricuspid) in more than one hundred hearts, and the lesion was slight. The atypical cases involve the right side of the heart frequently, in one instance the pulmonary valve being affected. This valve was not found affected in any definitely proved case of rheumatic fever. Terminal endocarditis appears to be a disease of the left side of the heart, the mitral valve being the usual seat of the disease. Other clinical phases of endocarditis are considered by Libman, and in closing he says that it is evident that the disease which was considered rare, subacute bacterial endocarditis, is now recognized as one of the common diseases. It was supposed to be a practically uniformly fatal disease. Now more and more often partial or complete recoveries are noted. Very mild cases exist, and there is a recurrent form of the disease. In other words, the interest is shifted toward the question of healing. It will be of the greatest value if an active campaign is undertaken for the purpose of preventing this as well as other forms of endocarditis.

TRICOPHYTOSIS *

Three patients in one family (case reports).

By EDWARD D. LOVEJOY, M. D., Los Angeles

Trichophytosis or epidermophytosis, as we name the infection produced by one variety of the tinca fungus, is now easily recognized, and many cases previously diagnosed eczema are now found to belong to this group.

The reason for the present paper is to report a familial outbreak of the infection, for while we all see many cases, reports of the infection spreading through a family are of much rarer occurrence. According to Dr. White the sources of infection are: "The use of dirty, sweat-soaked, ill-kept athletic clothes and the intimate contact with clothing of animal origin." This has been frequently demonstrated, and as regards foot infection we might add coco mats and the floors of lockers and dressing rooms. One factor which undoubtedly plays a large part in the spread of the infection is the condition of the skin, skin softened by hot water, sweat and friction, with the consequent removal of the horny layer, being much more susceptible. This is proved by the common locations of the disease, the interdigital spaces, the axilla and groin, the hands, which are kept dryer and exposed to the air being less frequently attacked. According to recent work done by Dr. Greenwood, the fungi shows on cultivation two forms, the vegetative and the spore formation, the former being the growth found in scrapings and dried vesicles taken from the lesions. The cultures are grown at room temperature, but with considerable difficulty, and identification of the various genera cannot be made from the mycelial threads alone, so while we diagnose certain tinea lesions as due to the epidermophyton inguinale the diagnosis is based on clinical appearance rather than cultural growth.

Considering these facts the question arises, what form of the fungus resides in infected material? All objects so far recognized as the retaining host are dry at least part of the time, which fact would lead to the conclusion that we would find a spore form, and that a retaining host must exist is sufficiently proven by the histories of the cases.

The first patient seen was the mother, Mrs. W., referred to by Dr. Howard Morrow; family history and general examination unimportant.

The disease was present on both hands, the lesions occurring between the fingers, covering about half the proximal phalanx, but much worse on the palms where infiltration and fissuring rendered them quite painful, and interfered with her housework. This had been present about one year, no marked lessening of the outbreak having occurred, probably on account of the irritation kept up by her work. The fungus was found in the older border vesicles.

The daughter had contracted the infection at about the same time. The lesions covered a smaller area, being practically confined to the fingers. The

interdigital spaces between the second and third, and third and fourth fingers were involved in the right hand—one only on the left, but the tips of the second and third fingers of both hands were deeply fissured and painful, closely resembling an eczema. There was a mild hyperidrosis of the hands. Fungus was present.

The son gave a history of infection of both feet and hands of five years' duration contracted while he was away from home. Said he had had a good deal of treatment which did no good, and came in the office on account of an attack of pityriasis rosea. The epidermophytosis he looked upon as incurable, and except for occasional itching it gave him but little inconvenience. Examination showed lesions between two toes on the right foot, skin white, slightly sodden, itching little or none; both hands involved between the fingers and extending slightly onto the backs, skin dry, scaling, slightly more itching than on feet. Several slides were examined before the fungus could be found.

Here, undoubtedly, we have two cases infected from a third, and as far as can be shown by the histories a roller towel was the retaining host. This towel was, however, used by all members of the family, and yet the father and other daughter at no time showed any lesions. All three cases responded readily to treatment, and after a period of fifteen months for the first two and eight months for the third have not recurred.

These cases, as well as the isolated ones, open up a field for further cultural study and examination of possible infected material, with the object of ascertaining in what form the epidermophyton is retained in clothing, towels, etc., and also if there are other sources of infection at present unknown, but until this has been discovered the best we can do is to treat the cases as they occur.

In the cases of tinea circinata we not only recognize the fungus, but also know that household pets are the source of origin and so are able to control the outbreak, but in epidermophytosis much evidence yet remains to be collected.

The Pork Barrel in the Offing—"In the State of New York," points out the Columbus Dispatch editorially, "it has been proposed to subsidize physicians in rural communities where modern conditions are alleged to have left the people without adequate medical aid. A committee of five physicians, appointed to investigate and report on the situation, has reported to Governor Smith that matters are not nearly so bad as a superficial consideration would suggest.

"In districts where a less number of physicians are now in practice, it is found that in many cases there has been a decrease in population also, so that the numerical ratio has not been seriously altered. Still further, the prevalence of disease is less than in former times, and with the aid of the automobile and improved roads, the physician can care for a larger number of patients than before.

"The committee therefore advises against any subsidy plan as unnecessary, and alleges that in Pennsylvania, where such a system has been tried, it has failed to do any good from the medical point of view, and the distribution of the subsidy has degenerated into a matter of 'pork barrel' politics."—From report of Committee on Medical Economics, Ohio State Medical Journal, May, 1923.

* Presented to the Section on Dermatology and Syphilology at the Fifty-second Annual Session of the California Medical Association, San Francisco, June, 1923.

EDITORIALS

WHAT IS NAPRAPATHY?

The Journal is not infrequently asked this question. We will answer it by quotations from "The Pacific Naprapath," published apparently by one "Dr." H. D. Reynard. The opening article in Vol. 1, No. 1, is by "Dr." Oakley (not Dudley) Smith, "founder and president of the Chicago College of Naprapathy." The leading editorial states: "If I were speaking to the readers of this paper in a group and should mention some object with which they were all familiar, it is very improbable that any two would think of it in the same way. Take the word organ, for instance, one would immediately think of the great pipe organ in their church; another, the little organ down at the Mission; still another, the little parlor organ they had at home when a child, or if some one happens to be a student of anatomy he thinks of the organs of the body, organ of hearing, seeing, breathing or some other of the bodily organs." Some of the questions and answers published on page five are: "Does naprapathy teach that displaced vertebrae cause disease? No, because naprapathy has proven in laboratory and clinic that vertebrae do not become displaced, or get out of place. On the contrary, they get too much in place, are drawn too closely together. Does the naprapath 'adjust' the vertebrae? No, he uses the vertebrae as levers to stretch shrunken and contracted ligaments. Does naprapathy teach that the nerves are pinched by the bones of the spine? No. It teaches that the nerve function is impaired by the contraction of the connective tissue through which the nerves pass. Naprapathy teaches that the real disease is the shrunken ligament, and that conditions in the body heretofore believed to be disease are but the symptoms of the real disease in the ligament, THE LIGATIGHT, the predisposing cause."

Now if you don't know what Naprapathy is, ask one of your friends to get you a copy of the pamphlet referred to and study the illustrations.

IMPROVEMENT IN MEDICAL EDUCATION AND LICENSURE

The Journal of the American Medical Association in a recent number published the annual statistics regarding the conditions governing licensure for those who treat the sick in all states of the United States. There is much that is encouraging in these figures. Nearly 80 per cent of all licenses issued during last year were to graduates of Class A medical schools. The gain in this respect has been healthy and gradual year after year and conditions seem to be favorable for further gains. There are some sad situations in a few states. Connecticut and Arkansas are almost open shop for the licensure of the poorly educated and some of those licensed last year apparently had not even made gestures at education. Of the seventy-four osteopaths licensed as physicians and

surgeons last year in the entire United States, forty-eight were licensed in California, thirteen in Massachusetts, eight in Colorado and five in Texas. These licentiates, graduates of colleges seriously deficient in instructional facilities, were given by law all the responsibilities of doctors of medicine, including the right to prescribe narcotics and alcohol. Let us hope in the interest of the health and happiness of their public that some of them at least will make up their educational deficiencies and not rest too heavily upon their political title.

The statistics do not go into the problem of the licensure of the great variety of sects who claim to believe they can "cure" disease by some sort of hocus-pocus without a knowledge of the anatomy, physiology and chemistry of the human body and the natural history of disease. Nor do the statistics include those "doctors" who are above the law, who treat alleged diseases by alleged superior contact with God and who "heal" (?) without special education, without authorization by law, without regulation and without taxation.

NEW YORK TAKES ANOTHER STEP IN THE SOCIALIZATION OF MEDICINE AND PUBLIC HEALTH

Physicians have watched with interest the progress of the "State medicine" program promoted by public health organizations of New York. According to their own publication, their program of "health centers" failed to pass the legislature in 1920 and 1921 because of the opposition of physicians. The last legislature passed a law providing "that when any county containing no first or second-class city should undertake a new public health project and make an appropriation therefor, either for small hospitals in rural districts or for public health activities of any other kind, the State should appropriate a similar amount dollar for dollar. The State Commissioner of Health must certify that the work undertaken is necessary and in conformity with the standards of the Department of Health."

The State Board of Health congratulate themselves upon the success of this measure in the following ingenuous language:

"It is gratifying that the outcry over the imaginary dangers of 'socialism' and 'State medicine' has been absent from the whole course of this year's consideration of the question. On the contrary, New York State has quietly and rationally attacked a problem which equally exists in other parts of the country, and has taken a promising step in the direction of its solution. This has been accomplished amid good feeling through the application of the required amount of that American common sense which meets new conditions with concrete and expedient measures, and does not stop to worry too much about the abstract economic implications."

Many of the men in authority at the New York State Board of Health headquarters are well-known physicians. Some of them are also well versed in State politics of which they are an essential element. They are not unknowingly misleading them-

selves and they, of course, know that they have not and will not succeed in converting physicians to believe in State medicine. We doubt if their educational training and experience will permit them to believe that their movement will prove of practical benefit to the people of the state. In fact, they intimate as much in their statement, which pronounces their new law an "expedient measure."

GRADUATE INSTRUCTION

An interesting and important movement in the cause of better medicine is described in an address by T. C. Routley, published in this issue of the JOURNAL. Doctor Routley, who is secretary of the Canadian Medical Association, was a guest of the California Medical Association, and gave his address by invitation.

It is believed that officers, program committees, and members of county medical societies will be encouraged and gain inspiration from careful reading of this address.

Other medical organizations have attempted to develop along similar lines, but so far as we know none has laid its plans so carefully or followed them out so successfully as Canada. Papers, addresses, and clinics by voluntary action of members have been offered to county societies in California for some years, and some progress has been made in developing the plan. But we have not attained the success that the importance of the movement deserves. Would it not be a splendid thing to catch the spirit and enthusiasm outlined for us by Dr. Routley and apply it in California?

County societies that are interested will be met in a sympathetic manner if they will write to Emma W. Pope, secretary California Medical Association.

WHAT DOES THIS PORTEND?

The following is taken from an address by a Professor Freeman, M. D., of the Johns Hopkins School of Public Health delivered at the New York health officers' conference. This abstract and more of this speech is published in the weekly bulletin of the California Board of Health:

"It seems probable that for rural areas at least medical health service of the future will center about the county hospital. Such a hospital, with a whole-time staff on a salary basis, with its attached out clinics, will be the chief source of medical service. To it will come all the seriously sick of the county, all maternity cases, all obscure chronic complaints, for diagnosis by every available means and for treatment, the best that can be had. Out from the hospital will go the visiting nurses, covering the whole county, doing what we know as public health nursing as well as ordinary visiting nursing, if there is any distinction between the two. The private practitioners of the county will be mainly concerned with the health supervision of their patients. They will probably be paid on an annual fee basis and will have approximately 1000 patients each. Everyone will be under constant supervision.

There will be no need of much of what we ordinarily call health work. It will be the routine, normal activity of the whole medical service. The medical director of the county will be in charge of the whole organization, under a board of trustees. The whole will be supported in part from State and local funds, but largely from the payments of patients. The savings in medical and surgical fees which would result from having a single consulting physician and a single surgeon, kept constantly busy with an even flow of material, instead of having several practicing over a large area and spending most of their time going to and fro as at present, 'would be great.'"

This speech was not delivered in Moscow, but in New York. There were other addresses of the same general trend, although they did not go quite so far nor were they quite so frank in the statements of purpose. Recently, another public health specialist from New York was paid to come to San Francisco and "survey" the hospital and health field. He recommended that the San Francisco County Hospital be opened to patients who can pay small fees. This, of course, would be an important practical step in developing the program so frankly outlined by Professor Freeman.

UTAH MEDICAL ASSOCIATION

Beginning with the August, 1923, number, the Journal of the California Medical Association became the official organ of the Utah Medical Association. The Journal has been the official organ of the Nevada Medical Association for more than a year.

Each of these two States will have an associate editor on the Journal, and the combined representation of the three State organizations gives to the Journal increased circulation, and increases its field of usefulness in every way.

The contact with the Utah Medical Association is shown in the following abstract from the minutes of their council:

"At our last meeting it was suggested to use the California State Journal of Medicine as our official organ instead of Northwest Medicine. The House of Delegates referred this matter to the council to investigate with power to act. After much deliberation, we have unanimously decided the best interests of the members of the Utah State Medical Association can be obtained through the adoption of the California State Journal of Medicine, which is recognized as an ideal medical journal, and was so exhibited at a recent meeting of the American Medical Association. Therefore, commencing with August of this year, you will receive your first issue of this magazine.

With this change goes also the appointment of an associate editor and, after counsel with your president, we have chosen a man whom we feel will fill this position in a creditable manner for this association, and we trust the secretaries of the component county societies will feel free to furnish the associate editor with all locals which will be of interest to the medical profession."

STATE SOCIETY



GRANVILLE MacGOWAN, President-Elect.

MINUTES OF THE HOUSE OF DELEGATES, FIFTY-SECOND ANNUAL SESSION OF THE MEDICAL SOCIETY OF THE STATE OF CALIFORNIA.

First Session

Held at the Civic Auditorium, San Francisco, California, Friday evening, June 22, 1923, at 8 p. m.

Roll-Call—Rene Bine of San Francisco, in the absence of the acting associate secretary, was requested to call the roll.

Harlan Shoemaker, secretary of the Los Angeles County Medical Association, advised the house that the resignation of Granville MacGowan of Los Angeles as delegate from the Los Angeles County Medical Association had been received in his office too late to be forwarded to the State Society in time for this meeting. He then presented the resignation of Granville MacGowan, which was unanimously accepted by the House of Delegates.

Seventy-one (71) delegates were seated, and the president, H. G. Brainerd, declared a quorum present.

Report of the President—The report of the president having been presented to the general sessions was considered presented to this body.

Appointment of Reference Committee—The president appointed the following reference committee: Rene Bine, San Francisco, chairman; Joseph M. King, Los Angeles; George W. Walker, Fresno, and

Hartley F. Peart, general counsel of the Society, ex-officio.

Report of Committee on Scientific Program—The secretary, as chairman ex-officio of the Committee on Scientific Program, submitted the following report:

The activities of the Committee on Scientific Program are shown in the complete program of the meeting, which was published in the June number of the California State Journal of Medicine. While it is required that the chairman of the committee report to the House of Delegates on the work of his committee, there is no reason for it, as the activities of this committee are published in full in the Journal and speak for themselves.

The Program Committee wishes to state that there was some difficulty in arranging the program this year because of the short time allowed for the meetings of the State Society and because of the meeting of the A. M. A., nevertheless the program was arranged and published in the Journal.

On motion of John C. Yates, San Diego, seconded by Fred R. De Lappe, Modesto, the report as submitted by the chairman was approved, and the president declared the report accepted.

Report of the Auditing Committee—Rene Bine of San Francisco, chairman of the Auditing Committee, presented a brief report, stating that the statements and audits which were made by a firm of certified public accountants once a year, would be laid on the table for any one to see if they so desired. The report as submitted was accepted by the House of Delegates.

Report of Committee on Expert Medical Testimony—Gayle G. Moseley of San Francisco, chairman of the Committee on Expert Medical Testimony, stated that his committee had no report to make and that he did not know his committee was still functioning.

Report of Committee on Ideal Fee Schedule—Emmet Rixford of San Francisco, chairman of the Committee on Ideal Fee Schedule, not being present, no report was submitted by this committee.

Report of Committee on Local and State Expenditures for Medical and Sanitary Measures—Thomas J. Cox of Sacramento, chairman of the Committee on Local and State Expenditures for Medical and Sanitary Measures, having died last year, no report was submitted by this committee.

Report of Committee on Codification of Constitution and By-Laws of the Medical Society of the State of California—The secretary, as chairman of this committee, stated that the committee had been appointed two years ago; that it had prepared a constitution and by-laws, which had been published in the State Journal twice during the past year and would be voted upon by the House of Delegates tomorrow afternoon.

The secretary further stated that the proposed constitution had been submitted to the Council on Legislation, the Judicial Council, the secretary and the general manager of the A. M. A., and was also submitted to various men of the State, who study organization matters, and has the unqualified approval of every man who has seen or had anything to do with it. The committee hopes that you will look it over carefully and be prepared to vote upon it tomorrow.

Report of Committee on Industrial Accident Insurance Work—James H. Parkinson of Sacramento, chairman of the Committee on Industrial Accident Insurance Work, submitted a final report on the work of his committee as published in the August Journal.

Report of the Secretary-Editor—W. E. Musgrave of San Francisco, secretary-editor, submitted the following report:

I have prepared no report, as Doctor Parkinson, in the report of the Council, has already covered the activities of the State office, and the State Journal speaks for itself. The Publicity Bureau,

Council and the editor have tried to improve the Journal with each number.

I want to include in this report what we have done to carry out the policy you approved in Yosemite last year; that is, to spread the Journal over a larger territory. Acting under such instructions, we have made contact with the Nevada State Medical Association by which our Journal is the official organ of that association; and the members of that association are paying, through their secretary, a lump sum, \$2 per year; and they have appointed an associate editor for their association.

Within the last few days, the Utah Medical Association has made our Journal their official organ, and has appointed an associate editor for their association.

On motion of John C. Yates, San Diego, seconded by Wood C. Baker, San Mateo, the Reference Committee was instructed to prepare a resolution commending the secretary-editor, and the president declared the motion unanimously carried.

Report of the Legal Department—The report of the Legal Department having been presented at the general sessions by the general attorney, Hartley F. Peart, was considered presented to this body.

Unfinished Business—There was no unfinished business to come before the meeting.

New Business—In accordance with the rules of the Society, the following resolutions were presented and referred to the Reference Committee. For text of these resolutions and final action by the House of Delegates, see minutes of the second session.

Resolution No. 1. **Termination of Medical Defense.** Presented by the Council.

Resolution No. 2. **Medical Defense for New Members.** Presented by the Council.

Resolution No. 3. **Termination of Indemnity Defense Fund.** Presented by the Council.

Resolution No. 4. **Annual Dues.** Presented by the Council.

Resolution No. 5. **Harrison Narcotic Act—National Prohibition Act.** Presented by the Council.

Resolution No. 6. **Training of Veterans.** Presented by the Council.

Resolution No. 7. **Medical Service Cards for Industrial Accident Insurance Work.** Presented by the Council.

Resolution No. 8. **Bunnell Memorial.** Presented by the Council.

Resolution No. 9. **Alleged Post-Graduate Instruction.** Presented by the Los Angeles County Medical Association.

Resolution No. 10. **Industrial Accident Work.** Presented by the Industrial Accident Section of the Los Angeles County Medical Association and endorsed by the Section on Industrial Medicine and Surgery of the State Society.

Resolution No. 11. **Extension of Co-operation to U. S. Veterans' Bureau.** Presented by the Veterans' Bureau through the Council.

Report of the Council—There being no other new business, the president requested the chairman of the Council to submit a supplemental report on the work of the Council.

On motion of Rene Bine, San Francisco, seconded by Harlan Shoemaker, Los Angeles, the chairman was requested to read the full report of the Council, inasmuch as many of the delegates were not present at the general session when the full report had been presented.

James H. Parkinson of Sacramento, chairman of the Council, then submitted the report of the Council as published in the August Journal.

Committee of the Whole—On motion of Bine, San Francisco, seconded by Parkinson, Sacramento, and unanimously carried, it was resolved that, at

the conclusion of all business, the House of Delegates adjourn and re-convene as a Committee of the Whole.

Adoption of Minutes—The minutes of this session were then read, and, on motion of Parkinson, Sacramento, seconded by Bine, San Francisco, and carried, the minutes as read were approved.

Adjournment—There being no further business, on motion of Bine, San Francisco, seconded by Parkinson, Sacramento, the meeting adjourned to meet as a Committee of the Whole.

MINUTES OF THE HOUSE OF DELEGATES, FIFTY-SECOND ANNUAL SESSION OF THE MEDICAL SOCIETY OF THE STATE OF CALIFORNIA.

Second Session

Held at the Civic Auditorium, San Francisco, California, Saturday afternoon, June 23, 1923, at 2 p. m.

Roll-Call—Sixty-nine (69) delegates were seated, and the president, H. G. Brainerd, declared a quorum present.

Place of Meeting, 1924—The chairman of the Council announced that, by unanimous action of the Council, the invitations of the profession of Southern California, as extended by Doctor W. T. McArthur and the Los Angeles Chamber of Commerce to hold the 1924 meeting in Los Angeles, had been accepted, and that the date of the meeting would be set later by the Council.

Election of Officers

President-Elect—Granville MacGowan of Los Angeles was nominated for president-elect by W. T. McArthur, Los Angeles. The nomination was seconded by Victor G. Vecki, San Francisco, and Joseph M. King, Los Angeles. On motion of James H. Parkinson, Sacramento, seconded by William H. Gilbert, Los Angeles, the nominations were closed, and the secretary cast the ballot, and Granville MacGowan was declared elected president-elect of the Society for 1923.

First Vice-President—William H. Strietmann of Oakland was nominated for first vice-president by Dudley Smith, Oakland. On motion of George H. Kress, Los Angeles, seconded by C. F. Welty, San Francisco, the nominations were closed, and the secretary cast the ballot, and William H. Strietmann was declared elected first vice-president.

Second Vice-President—Ruggles A. Cushman of Santa Ana was nominated for second vice-president by Paul E. Simonds, Riverside. The nomination was seconded by Harry E. Zaiser, Orange. On motion of A. J. Scott, Los Angeles, seconded by A. S. Granger, Los Angeles, the nominations were closed, and the secretary cast the ballot, and Ruggles A. Cushman was declared elected second vice-president.

Secretary-Editor—Emma W. Pope of San Francisco was nominated for secretary-editor by Thomas C. Edwards, Salinas. The nomination was seconded by Parkinson, Sacramento, on behalf of the Council, and by Joseph M. King, Los Angeles, on behalf of William E. Musgrave, San Francisco. On motion of Gilbert, Los Angeles, seconded by Bine, San Francisco, the nominations were closed, and the secretary cast the ballot, and Emma W. Pope was declared elected secretary-editor.

Councilors

Third District—William M. Stover of San Luis Obispo was nominated for councilor for the Third District by George D. Kelker, Paso Robles, said nomination being seconded by F. E. Blaisdell, Santa Paula. On motion of Parkinson, Sacramento, seconded by Gilbert, Los Angeles, the nominations were closed, and the secretary cast the ballot, and William M. Stover was declared elected councilor for the Third District for the ensuing three years.

Fifth District—David A. Battie of San Jose was nominated for councilor for the Fifth District by

James B. Bullitt, San Jose, said nomination being seconded by F. H. Paterson, San Jose. On motion of Gilbert, Los Angeles, seconded by Harlan Shoemaker, Los Angeles, the nominations were closed, and the secretary cast the ballot, and David A. Beattie was declared elected councilor for the Fifth District for the ensuing three years.

Sixth District—Walter B. Coffey of San Francisco was nominated for councilor for the Sixth District by H. E. Alderson, San Francisco, said nomination being seconded by Vecki, San Francisco. On motion of Gayle G. Moseley, San Francisco, seconded by M. O. Austin, San Francisco, the nominations were closed, and the secretary cast the ballot, and Walter B. Coffey was declared elected councilor for the Sixth District for the ensuing three years to succeed himself.

Seventh District—Edward N. Ewer of Oakland was nominated for councilor for the Seventh District by Lemuel P. Adams, Oakland, said nomination being seconded by Sol Hyman, San Francisco. On motion of Parkinson, Sacramento, seconded by Vecki, San Francisco, the nominations were closed, and the secretary cast the ballot, and Edward N. Ewer was declared elected councilor for the Seventh District for the ensuing three years to succeed himself.

Ninth District—James H. McLeod of Santa Rosa was nominated for council or for the Ninth District by S. Z. Peoples, Petaluma, said nomination being seconded by Fred R. De Lappe, Modesto. On motion of A. M. Rogers, Los Angeles, seconded by Gilbert, Los Angeles, the nominations were closed, and the secretary cast the ballot, and James H. McLeod was declared elected councilor for the Ninth District for the ensuing three years to succeed himself.

At Large (4)—William H. Gilbert of Los Angeles was nominated for councilor-at-large by Walter Huggins, Los Angeles, said nomination being seconded by Harry Spiro, San Francisco.

William T. McArthur of Los Angeles was nominated for councilor-at-large by Donald Frick, Los Angeles, said nomination being seconded by A. J. Scott, Los Angeles.

Charles L. Curtiss of Redlands was nominated for councilor-at-large by F. H. Folkins, Redlands, said nomination being seconded by C. F. Welty, San Francisco.

George H. Kress of Los Angeles was nominated for councilor-at-large by A. S. Granger, Los Angeles, said nomination being seconded by C. F. Welty, San Francisco.

On motion of Dudley Smith, Oakland, seconded by Parkinson, Sacramento, it was resolved that the house proceed to elect two councilors-at-large from Los Angeles County, inasmuch as two must come from that county.

The president appointed Gayle G. Moseley, San Francisco, and P. M. Carrington, San Diego, as tellers. The following votes were cast: William T. McArthur, 59; George H. Kress, 52; William H. Gilbert, 23. The president declared William T. McArthur and George H. Kress elected councilors-at-large from Los Angeles County for the ensuing three years.

Rene Bine of San Francisco was nominated for councilor-at-large by Dudley Smith, Oakland, said nomination being seconded by Vecki, San Francisco. On motion of H. H. Lissner, Los Angeles, seconded by Emma E. McKay, Hollister, the nominations were closed, and the secretary cast the ballot, and Rene Bine was declared elected councilor-at-large for the ensuing three years to succeed himself.

Charles L. Curtiss of Redlands, having been previously nominated, was re-nominated for councilor-at-large by C. Van Zwahlenburg, Riverside, who also moved that the nominations be closed, said motions being seconded by F. H. Folkins, Redlands. The motions being unanimously carried, the secretary

cast the ballot, and Charles L. Curtiss was declared elected councilor-at-large for the ensuing three years.

Member of Committee on Scientific Program—F. M. Pottenger of Monrovia was nominated as member of the Committee on Scientific Program by Robert Day, Los Angeles, said nomination being seconded by A. M. Rogers, Los Angeles. On motion of Rogers, Los Angeles, seconded by Gilbert, Los Angeles, the nominations were closed, and the secretary cast the ballot, and F. M. Pottenger was declared elected a member of the Committee on Scientific Program for the ensuing four years to succeed himself.

Delegates to the American Medical Association (2)—The point was then raised that delegates elected at this time could not be seated under the rules of the American Medical Association, as the time for filing the names with the secretary had elapsed. The general counsel stated that, under these circumstances, it was best not to hold an election, but to allow the present delegates to hold over. The hold-over delegates are as follows: C. Van Zwahlenburg, Riverside, Riverside County; E. C. Fleischer, San Francisco, San Francisco County.

Alternates to the American Medical Association (2)—The hold-over alternates to the American Medical Association are as follows: Albert Soiland, Los Angeles, Los Angeles County; Walter C. Alvarez, San Francisco, San Francisco County.

Report of Committee on Ideal Fee Schedule—Emmet Rixford of San Francisco, chairman of the Committee on Ideal Fee Schedule, then read the report of his committee as published in the August Journal.

On motion of Parkinson, Sacramento, seconded by H. H. Lissner, Los Angeles, the report of the Committee on Ideal Fee Schedule as submitted was referred to the Council. The motion was unanimously carried.

Report of the Reference Committee—Rene Bine, chairman of the Reference Committee, reported for the committee as follows:

1. **President's Address**—The committee recommends that the various suggestions of the president regarding race betterment, legal enactments, State and National, and further immigration restrictions be referred to the Council for consideration.

Action by the House of Delegates: On motion, duly made and seconded, it was unanimously resolved that the recommendations of the Reference Committee be approved.

2. **Doctor T. C. Routley's Address**—The committee recommends that the question of "Graduate Instruction for Physicians in General Practice," as outlined by Doctor T. C. Routley in his address, be referred to the Council.

Action by the House of Delegates: On motion, duly made and seconded, it was unanimously resolved that the recommendation of the Reference Committee be approved.

3. **Report of the Council**—(a) Neglected Grave of First President: The committee recommends that the matter of the neglected grave of the first president, Doctor B. F. Keene, be referred to the Council with power to act. (b) Service Bureau: The committee recommends that this type of advertising be discontinued.

Action by the House of Delegates: On motion, duly made and seconded, it was unanimously resolved that the recommendations of the Reference Committee be approved.

4. **Resolution No. 1. Termination of Medical Defense:** The text of the resolution is as follows:

Whereas, The House of Delegates, at its regular annual meeting held at Yosemite, May 17, 1922, unanimously adopted a resolution directing the Council to make medical defense optional, the cost thereof to be met by separate assessment on the members desiring it; now therefore be it

Resolved, That medical defense be terminated as

of June 30, 1924, and that the Council is hereby authorized to effect, if possible, a blanket defense policy arrangement with one or more insurance companies, to be made optional for such members as desire such protection, and thereby retain for such members the services of the Society's legal staff; or, if such blanket policy plan is not found practicable, to arrange and submit to the membership a plan optional to each member to retain the Society's legal staff.

Action by the Reference Committee: The committee recommends that the resolution terminating medical defense and authorizing arrangements for a blanket policy for members desiring same, as presented by the Council, be adopted.

Action by the House of Delegates: On motion, duly made and seconded, it was unanimously resolved that the recommendation of the Reference Committee be approved.

5. Resolution No. 2. Medical Defense for New Members: The text of the resolution is as follows:

Resolved, That medical defense shall not extend nor be afforded to any person becoming a member of the Society on or after September 1, 1923, and that the secretary immediately forward a copy of this resolution to the secretaries of constituent county societies.

Action by the Reference Committee: The committee recommends that the resolution refusing medical defense for members joining after September 1, 1923, as presented by the Council, be adopted.

Action by the House of Delegates: On motion, duly made and seconded, it was unanimously resolved that the recommendation of the Reference Committee be approved.

6. Resolution No. 3. Termination of Indemnity Defense Fund: The text of the resolution is as follows:

Whereas, The Council, under instructions from the House of Delegates to present a plan to make medical defense optional, has conducted a canvass of the members of the Indemnity Defense Fund, being those members most interested in the subject of physicians' defense, in an effort to incorporate such Indemnity Defense Fund, but finds that such incorporation plan is not acceptable to a sufficient number of members to warrant further effort, and that it is not possible because of lack of support; now therefore be it

Resolved, That the Indemnity Defense Fund be discontinued as a Society undertaking at such time and upon such notice as the Council shall deem necessary for the best protection of its members, and the Council is hereby directed to accept no further memberships in the Indemnity Defense Fund.

Action by the Reference Committee: The committee recommends that the resolution discontinuing the Indemnity Defense Fund, as presented by the Council, be adopted.

Action by the House of Delegates: On motion, duly made and seconded, it was unanimously resolved that the recommendation of the Reference Committee be approved.

7. Resolution No. 4. Annual Dues: The text of the resolution is as follows:

Resolved, That the annual dues for the year 1924 be fixed at \$10 as for the previous year, with the expectation that a reduction will be made the following year.

Action by the Reference Committee: The committee recommends that the assessment for the year 1924 be fixed at \$10.

Action by the House of Delegates: On motion, duly made and seconded, it was unanimously resolved that the recommendation of the Reference Committee be approved.

8. Resolution No. 5. Harrison Narcotic Act—National Prohibition Act: The text of the resolution is as follows:

Resolved, That the Medical Society of the State of California respectfully petitions the Bureau of

Internal Revenue, and the Bureau of Prohibition Enforcement of the Treasury Department of the United States, that proposed regulations relating to the practice of medicine and the medical profession to be promulgated under the "Harrison Narcotic Act" and the "National Prohibition Act" be published and copies thereof furnished interested persons who have previously filed requests therefor with the proper department or bureau, and that such persons and any others interested be given an opportunity to submit any facts or information in their possession in relation to any proposed regulation to the proper department or bureau before any regulation or change in existing regulation is finally promulgated; and be it further

Resolved, That a copy of this resolution be sent to the President of the United States, the Secretary of the Treasury, the Commissioner of Internal Revenue, and the Prohibition Commissioner.

Action by the Reference Committee: The committee recommends that the resolution requesting the submission of changes in regulations to those interested before promulgating be adopted.

Action by the House of Delegates: On motion, duly made and seconded, it was unanimously resolved that the recommendation of the Reference Committee be approved.

9. Resolution No. 6. Training of Veterans: The text of the resolution is as follows:

Resolved, That the Medical Society of the State of California heartily commends and approves the action of Colonel Frank T. Hines, director of the Veterans' Bureau of the United States, in terminating any instruction or training of veterans of the World War in so-called chiropractic as an official function of the Veterans' Bureau. This in the interests of Public Health.

Action by the Reference Committee: The committee recommends that the resolution commending Colonel Frank T. Hines for improving the training of veterans be adopted.

Action by the House of Delegates: On motion, duly made and seconded, it was unanimously resolved that the recommendation of the Reference Committee be approved.

10. Resolution No. 7. Medical Service Cards for Industrial Accident Insurance Work: The text of the resolution is as follows:

Resolved, That it is the opinion of the Council of the California Medical Association that all Medical Service Cards should be the property of the insurance carrier and/or the employer where such card is displayed. It is also the sense of the Council that all the expense of providing Medical Service Cards should be borne by the insurance carrier and/or the employer; and be it further

Resolved, That it shall be considered unethical conduct on the part of any member of the California Medical Association to permit his or her name to appear on any Medical Service Card, unless the name of the insurance carrier and/or the name of the employer appears in bold type at the top of the Medical Service Card, and that no reading matter shall appear on the Medical Service Card with reference to the physician or surgeon, except his or her name, office location, and hours and telephone numbers; or to print, distribute, or use any Medical Service Card. It will be proper to have on the Medical Service Card the necessary hospital and ambulance service information; and be it further

Resolved, That all Medical Service Order Blanks shall have at the top of the card, "Medical Service Order of ————" and insert here the name of the insurance carrier and/or the employer. The Medical Service Order Blank should be printed in such manner as to clearly indicate that it is a Medical Service Order from the insurance carrier and/or the employer, and not a Medical Service Order Blank of the physician or surgeon himself.

Action by the Reference Committee: The committee recommends that the resolution presented by

the committee of the Council, specifying the form and manner of distribution of Medical Service Cards in industrial accident insurance be adopted.

Action by the House of Delegates: On motion, duly made and seconded, it was unanimously resolved that the recommendation of the Reference Committee be approved.

11. Resolution No. 8. **Bunnell Memorial:** The text of the resolution is as follows:

Resolved, That the Council recommend to the House of Delegates that a committee of three be appointed by the incoming president to investigate and consider the question of a memorial to commemorate the discovery of Yosemite by Doctor Bunnell, and that the committee report to the House of Delegates at the next annual meeting.

Action by the Reference Committee: The committee recommends the adoption of the resolution authorizing the appointment of a committee on proposed memorial.

Action by the House of Delegates: On motion, duly made and seconded, it was unanimously resolved that the recommendation of the Reference Committee be approved.

12. Resolution No. 9. **Alleged Post-Graduate Instruction:** The text of the resolution is as follows:

Whereas, It has repeatedly come to the notice of the Council of the Los Angeles County Medical Association that many irregulars of various cults have been and are being admitted, without discrimination, to the various surgical clinics, post-graduate schools, hospitals, and universities, in order to give a veneer to a very superficial education; therefore be it

Resolved, That the Council of the Los Angeles County Medical Association do hereby petition the House of Delegates of the Medical Society of the State of California to use its efforts to bring to the notice of the Council on Medical Education of the American Medical Association, the Bureau on Rating of Hospitals and Hospital Standardization of the American Medical Association, the American College of Surgeons and other allied institutions of learning, the continuous abuse of the privileges of the various clinics and hospitals throughout the East, by irregular practitioners, wherever located.

Action by the Reference Committee: The committee recommends that this resolution be referred to the Council for action.

Action by the House of Delegates: On motion, duly made and seconded, it was unanimously resolved that the words "throughout the East" be stricken out in next to last line of resolution, and that with such correction the recommendation of the Reference Committee be approved.

13. Resolution No. 10. **Industrial Accident Work:** The text of the resolution is as follows:

Whereas, Industrial accident work by members of the profession of the healing art is complicated by many professional, social and political factors; and

Whereas, It is desired to have in operation in industrial accident work a system which will keep constantly in mind the peculiar conditions surrounding this class of work which conditions necessitate, if the work is to be carried on to the best advantage of the injured persons, the interest of the State at large, and the profession as a whole, a special organization or adaptation on the part of the members of the profession who wish to do this work; now therefore be it

Resolved, That it is the sense of the Industrial Accident Section of the Los Angeles County Medical Association that the system which has thus far had the sponsorship of the Medical Society of the State of California has been found to work out along fairly efficient and practical lines; and be it further

Resolved, That it shall be the policy of the State Society, acting through its various offices, to refer to the Industrial Accident Section of the State So-

cietly all matters under discussion and pertaining to or affecting the industrial physicians or surgeons of our Society, and that their advice and counsel is to be given first consideration before the proposal of enactment of any legislation pertaining to this branch of medicine; and be it further

Resolved, That it is the sense of the Industrial Accident Section of the Los Angeles County Medical Association that the general methods incorporated under the system now in vogue should not be changed, unless after the most serious consideration.

Action by the Reference Committee: The committee recommends that the resolution as presented by the Industrial Accident Section of the Los Angeles County Medical Association and endorsed by the Industrial Medicine and Surgery Section of the State Society be referred to the Council for action.

Action by the House of Delegates: After a full discussion by H. G. McNeil, chairman of the Industrial Accident Section of the Los Angeles County Medical Association; Thomas C. Myers of Los Angeles, Joseph M. King of Los Angeles, and James H. Parkinson of Sacramento, on motion of Joseph M. King of Los Angeles, seconded by Emma E. McKay of Hollister, and unanimously carried, it was resolved that the whole matter be laid on the table for a year.

14. Resolution No. 11. **Extension of Co-operation to U. S. Veterans' Bureau:** The text of the resolution is as follows:

Whereas, In State convention assembled it has been brought to our attention that, as a result of wounds received in battle and of sickness and injuries received in the Military and Naval Service of this Nation, the United States Government finds itself today with many thousands of men and women who are being given either medical treatment or vocational training; and

Whereas, The National Government is pledged to return these men and women to useful and gainful employment at the completion of their vocational training; and

Whereas, The Government must of necessity rely on organizations such as ours and on the membership as individuals to furnish the necessary employment as required; therefore be it

Resolved, That the Medical Society of the State of California willingly and gladly extends its co-operation to the United States Veterans' Bureau, and agrees to do its utmost in helping the bureau to secure employment for every disabled veteran rehabilitated under Government auspices, by requesting the members of this organization as individuals to extend preferential treatment to them as they become ready for employment; and be it further

Resolved, That a copy of this resolution be spread upon the minutes of this meeting, a copy furnished to the press, and a copy forwarded to the manager of the United States Veterans' Bureau, Twelfth District, 883 Market street, San Francisco, California.

Action by the Reference Committee: The committee recommends that the resolution be adopted.

Action by the House of Delegates: On motion, duly made and seconded, it was unanimously resolved that the recommendation of the Reference Committee be adopted.

15. **Report of the Committee on Codification of Constitution and By-Laws:**

Action by the Reference Committee: The committee recommends that the proposed constitution and by-laws as published in the Journal for September, 1922, and amended and republished in June, 1923, be adopted with the following suggested amendment to Chapter IX, Section 1 of the By-Laws: "Amend Chapter IX, Section 1, line 2, by striking out the word "three-fourths" and substituting therefor the word "majority."

Action by the House of Delegates: After a full discussion by Harlan Shoemaker of Los Angeles, James H. Parkinson of Sacramento, Rene Bine of

San Francisco, Dudley Smith of Oakland, James H. McLeod of Santa Rosa, and Walter Huggins of Los Angeles, on motion of Rene Bine of San Francisco, seconded by James H. Parkinson of Sacramento, and unanimously carried, it was resolved that the word "three-fourths" in line 2, Chapter IX, Section 1 of By-Laws be changed to read "two-thirds"; and further resolved, that the constitution and by-laws as published in the June, 1923, issue of the California State Journal of Medicine and hereby amended be adopted.

16. Instructions to Delegates to A. M. A.:

Action by the Reference Committee: The committee recommends that the matter of instructions to delegates to the A. M. A. be referred to the Council.

Action by the House of Delegates: On motion, duly made and seconded, it was unanimously resolved that the recommendation of the Reference Committee be approved.

17. Resolution Commending the Secretary-Editor:

Action by the Reference Committee: The committee recommends the adoption of the following resolutions prepared in accordance with instructions from the House of Delegates:

Whereas, Doctor W. E. Musgrave has, in the past, contributed to the finances of the Society by voluntary and gratuitous service, and by services of personal employees and office premises; and

Whereas, His best efforts have always been at the disposal of the Society; now therefore be it

Resolved, That the House of Delegates, on behalf of the Medical Society of the State of California, desires to express its sincere appreciation of the services already rendered by Doctor Musgrave in its behalf, as well as his expressed willingness to continue these services in connection with the expansion of the Society, now in progress;

Resolved, That this Society, recognizing the advances it has made in the past two years, believes that Doctor Musgrave's executive ability and keen discernment of economic problems endangering the welfare of the profession will be most valuable and helpful in all our activities.

Action by the House of Delegates: On motion, duly made and seconded, it was unanimously resolved that the resolution submitted by the Reference Committee be adopted.

18. Resolution of Appreciation to Mayor and City Officials of San Francisco:

Action by the Reference Committee: The committee recommends the adoption of the following resolution:

Resolved, That the Medical Society of the State of California hereby extends its hearty thanks to the Mayor, the Board of Supervisors, the Board of Public Works, and the Civic Auditorium officials of San Francisco for the use of the Auditorium, and for the uniform courtesies extended to the Society and its members at this meeting.

Action by the House of Delegates: On motion, duly made and seconded, it was unanimously resolved that the resolution submitted by the Reference Committee be adopted.

19. Resolution of Appreciation to the Press and Celestine J. Sullivan:

Action by the Reference Committee: The committee recommends the adoption of the following resolution:

Resolved, That the Medical Society of the State of California appreciates and thanks the press of San Francisco and the national news services for the accurate and informative reports given its proceedings at this meeting; and further extends its thanks and appreciation to Celestine J. Sullivan for his able services in connection therewith.

Action by the House of Delegates: On motion, duly made and seconded, it was unanimously re-

solved that the resolution submitted by the Reference Committee be adopted.

20. Resolution of Appreciation to the San Francisco Convention and Tourists' League:

Action by the Reference Committee: The committee recommends the adoption of the following resolution:

Resolved, That the Medical Society of the State of California desires to express its thanks and appreciation to the San Francisco Convention and Tourists' League and its most efficient manager, Miss Mary Murphy, for invaluable aid and assistance afforded it in the conduct of this meeting.

Action by the House of Delegates: On motion, duly made and seconded, it was unanimously resolved that the resolution submitted by the Reference Committee be adopted.

Presentation of the President—Thomas Clay Edwards of Salinas, the incoming president, was escorted to the chair by Doctors Vecki and Kress. Doctor Edwards presented his inaugural address to the general sessions.

Presentation of the President-elect—The president stated that he wished to have the honor of escorting his old friend, Doctor Granville MacGowan of Los Angeles, president-elect, to the chair and asked Doctor Vecki to assist him.

Adoption of Minutes—The minutes of this session were then read, and, on motion of Parkinson, Sacramento, seconded by Bine, San Francisco, and unanimously carried, the minutes were approved.

Resolution of Appreciation to President Brainerd—On motion of McArthur, Los Angeles, and carried by acclamation, it was resolved that a vote of thanks be extended to President Henry G. Brainerd for his most valuable services in the chair.

Adjournment—There being no further business, the meeting adjourned to meet in Los Angeles at a time to be fixed by the Council.

COUNCIL PROCEEDINGS

Abstracts from the Minutes of the 137th, 138th, 139th and 140th Meetings of the Council of the California Medical Association, Held at San Francisco, June 21 to 23, 1923.)

Resolution on Passing of C. G. Kenyon—The acting associate secretary read the following resolution as prepared by the committee appointed at the January meeting of the Council:

"Whereas, Almighty God has, in His inscrutable wisdom, taken from among us our friend and companion, C. G. Kenyon; and

"Whereas, Doctor Kenyon was elected vice-president of the Medical Society of the State of California in 1879 and has been an officer of the society continuously from that date up to the time of his death, having served as president of the society thirty years ago this year; and

"Whereas, Doctor Kenyon served as chairman of the Council for more than twenty years, where he gave unstintingly of his time, energy and best judgment for the benefit of his profession; and

"Whereas, Doctor Kenyon did not limit the field of his activities to medicine and surgery, but was always active in every effort to advance the best interests of the community in which he lived; therefore be it

"Resolved, That the medical profession of the State of California has lost a member who always stood for progress, honesty, and service; that the Council has lost a presiding officer of unusual integrity and ability; that the community has lost an able and most honorable citizen; that a loving husband and a kind and generous father has been called from the activities of this world; that the Council of the Medical Society of the State of California extends to the family of our deceased co-worker its deepest sympathy in this hour of their loss, and that a copy of these resolutions be spread

on the minutes of the Council, and that a copy be sent to the family of our deceased companion.

"T. C. Edwards, Chairman;

"Frank H. Paterson,

"C. Van Zwalenburg."

On motion of Edwards, seconded by Paterson, it was resolved, that the resolution be adopted and spread on the minutes of the Council, and a copy sent to the family of Doctor Kenyon, and that the committee be discharged.

Gorgas Memorial—The Council was advised by the acting associate secretary that a report had been requested of the chairman of this committee, but that it had not been received. It was the sense of the Council that the president, who had appointed the committee, ascertain what action had been taken.

Question of Dividing United States Into Territorial Districts—The chairman of this committee, Paterson, advised that this matter had not been thoroughly investigated, but suggested that the Council advocate the grouping of California, Nevada, Utah, Colorado, Arizona, and New Mexico as a "Southwestern Territorial District," and possibly with the addition of the Hawaiian Islands. It was the sense of the Council that this report was too imperfect to consider and that the committee be continued. On motion of McArthur, seconded by De Lappe, the matter was laid on the table.

Matter of Closer Co-operation Between the State Society and County Societies—The matter of a closer co-operation between the State Society and the County Societies as presented by the secretary of the Los Angeles Medical Association was considered, and it was the sense of the Council that, when a representative of any section of a county society communicates in any way with the Council of the State Society, a copy of any reply made by the Council to such section shall be furnished the secretary of such county society.

Confirmation of Appointment of Associate Editor for Utah State Medical Association—The secretary then presented a letter from the Utah State Medical Association, advising of the appointment of W. R. Calderwood, M. D., Salt Lake City, Utah, as associate editor of the Journal, for the Utah State Medical Association. It was the sense of the Council that the appointment of W. R. Calderwood as associate editor of the California State Journal for the Utah State Medical Association be approved and confirmed.

Disposition of Property Belonging to State Medical Society—Saxton T. Pope, as chairman of this committee, stated that the librarian of the San Francisco County Medical Society had advised him that he was unable to compete with any bidders and regretted that the controversy had ever arisen. The chairman also stated that the Barlow Library had withdrawn its bid; that he had received no other bids; and that his committee recommended that the present arrangement with the San Francisco County Society be continued, with the proviso that such books as are necessary to the Journal be retained by the State Society.

William Duffield of Los Angeles stated that, inasmuch as he had originally bid for the Barlow Library, he now wished to withdraw the bid made by the Barlow Library. He also stated that the San Francisco County Library was paying all this property was worth, and further that the books and journals should be near the State Journal.

On motion of Bine, seconded by Paterson, it was resolved, that the report of the committee be accepted and the committee discharged, and that the San Francisco County Medical Library be advised as to the action taken.

Annual Dues—After discussion, on motion of Bine, seconded by Paterson, it was resolved, that the annual dues for the year 1924 be fixed at \$10, as for the previous year, with the expectation that a reduction will be made the following year.

Medical Service Cards—Gayle G. Moen, Chairman of the committee, presented the following resolutions on medical service cards and principles governing the distribution of such cards as prepared by the committee appointed by the Council at its last meeting:

"Resolved, That it is the opinion of the Council of the Medical Society of the State of California, that all medical service cards should be the property of the insurance carrier and/or the employer where such card is displayed. It is also the sense of the Council that all the expense of providing medical service cards should be borne by the insurance carrier and/or the employer; and be it further

"Resolved, That it shall be considered unethical conduct on the part of any member of the Medical Society of the State of California to permit his or her name to appear on any medical service card, unless the name of the insurance carrier and/or the name of the employer appears in bold type at the top of the medical service card, and that no reading matter shall appear on the medical service card with reference to the physician or surgeon, except his or her name, office location, and hours and telephone numbers; or to print, distribute or use any medical service card. It will be proper to have on the medical service card the necessary hospital and ambulance service information; and be it further

"Resolved, That all medical service order blanks shall have at the top of the card, 'Medical Service Order of _____' and insert here the name of the insurance carrier and/or the employer. The medical service order blank should be printed in such manner as to clearly indicate that it is a medical service order from the insurance carrier and/or the employer, and not a medical service order blank of the physician or surgeon himself."

On motion of McArthur, seconded by De Lappe, it was resolved, that the resolutions be adopted as read, and that they be submitted to the House of Delegates for ratification and adoption; and further that, when such resolutions have been regularly adopted by the House of Delegates, copies be sent to the secretary of each county society and to Doctor Burks of Fresno; and further, that the resolutions be published in the State Journal, together with an editorial comment thereon.

Legal Medicine and Legislation—The general counsel then presented the following resolution, prepared by him under the direction of the Publicity Bureau and in accordance with the request of the A. M. A.:

"Resolved, That the Medical Society of the State of California respectfully petitions the Bureau of Internal Revenue, and the Bureau of Prohibition Enforcement of the Treasury Department of the United States, that proposed regulations relating to the practice of medicine and the medical profession to be promulgated under the 'Harrison Narcotic Act' and the 'National Prohibition Act' be published and copies thereof furnished interested persons who have previously filed requests therefor with the proper department or bureau, and that such persons and any others interested be given an opportunity to submit any facts or information in their possession in relation to any proposed regulation to the proper department or bureau before any regulation or change in existing regulation is finally promulgated; and be it further

"Resolved, That a copy of this resolution be sent to the President of the United States, the Secretary of the Treasury, the Commissioner of Internal Revenue, and the Prohibition Commissioner."

On motion of Van Zwalenburg, seconded by Bine, it was resolved, that the resolution as submitted by the general counsel be adopted and submitted to the House of Delegates.

Resignation of Associate Secretary—The chairman then stated that, although the resignation of Howard

H. Johnson, M. D., as associate secretary of the State Society had been accepted by the Publicity Bureau and such acceptance confirmed by the Council when adopting the minutes of the Publicity Bureau, he felt that separate action should be taken by the Council in the matter.

On motion of Bine, seconded by Parker, it was resolved, that the resignation of Howard H. Johnson, M. D., as associate secretary of the State Society, as submitted to the Publicity Bureau and confirmed in its minutes, be accepted by the Council, and that a letter of regret and proper appreciation of his services be sent to Doctor Johnson.

Place of Annual Meeting for 1924—The secretary then presented invitations from the president of the Arlington Hotel, Inc., and the Los Angeles Chamber of Commerce, to hold the 1924 meeting in Santa Barbara and Los Angeles, respectively. He also presented an invitation from the Yosemite National Park Co. to hold the 1925 meeting in Yosemite. McArthur then extended an invitation in the name of the profession of Southern California to the Society to hold its 1924 meeting in Los Angeles.

On motion of Van Zwahlenburg, seconded by Carrington, it was resolved, that the Council, on behalf of the Society, accept the invitation to meet in Los Angeles in 1924 as extended by Doctor McArthur on behalf of the profession of Southern California, the date of such meeting to be fixed later; and further, that the secretary be instructed to acknowledge the invitations received from the Arlington Hotel, Inc., and the Yosemite National Park Co.

Committee on Codification of Constitution and By-Laws—The Committee on Codification of Constitution and By-Laws reported that the constitution has been printed in the Journal twice during the past year and was now ready to be submitted to the House of Delegates for adoption.

On motion of Van Zwahlenburg, seconded by Bine, it was resolved, that the constitution and by-laws as printed in the June, 1923, Journal be adopted and presented to the House of Delegates for consideration, ratification, and adoption.

Bunnell Memorial—The president presented a letter dated June 16 from Howard A. Kelly, M. D., Baltimore, Md., suggesting the erection of a memorial to Doctor Lafayette Houghton Bunnell in Yosemite Valley, Doctor Bunnell being the discoverer of the valley.

On motion of McArthur, seconded by McLeod, it was resolved, that the Council acknowledge the communication of Doctor Kelly as handed to it by the president, and that the Council recommend to the House of Delegates the authorization of a committee of three to be appointed by the incoming president to investigate and consider the question of a memorial to commemorate the discovery of Yosemite by Doctor Bunnell, and that the committee report to the House of Delegates at the next annual meeting.

Reorganization of the Council—On motion of Kress, seconded by Saxton Pope, James H. Parkinson of Sacramento was unanimously re-elected chairman of the Council for the ensuing year.

Status of Officers Elected Under Old Constitution and By-Laws—(a) Second Vice-President—The question of the status of the second vice-president as elected under the old constitution this afternoon by the House of Delegates was considered, inasmuch as the new constitution and by-laws does not provide for a second vice-president. It was the sense of the Council that Ruggles A. Cushman, Santa Ana, Orange County, be made an officer of the Society de facto for the ensuing year. The secretary was instructed to notify Doctor Cushman of the action taken by the Council.

(b) Secretary—The question of the status of the secretary elected by the House of Delegates this afternoon was considered, inasmuch as the new constitution and by-laws provides for the appointment of the secretary by the Council. It was the

sense of the Council that the election of Emma W. Pope, M. D., by the House of Delegates as secretary be confirmed, and Doctor Pope was thereupon duly elected secretary of the Society for the ensuing year.

Appointment of Editor—On motion of Kress, seconded by McArthur, it was unanimously resolved, that William E. Musgrave, San Francisco, be appointed as editor of the California State Journal of Medicine at a salary of \$1 per year, and that the secretary be instructed to notify Doctor Musgrave of his appointment.

Termination of Medical Defense and Indemnity Defense—The question of notifying the members of the Society and members of the Indemnity Defense Fund of the termination of medical defense and indemnity defense, as authorized by the House of Delegates at its meeting this afternoon, was fully considered.

On motion of Saxton Pope, seconded by McArthur, it was resolved, that the secretary be instructed to notify the members of the Association and the members of the Indemnity Defense Fund of the action taken by the House of Delegates this afternoon, and, at the same time, to return all powers of attorney held at the office; and further, that the secretary submit such form of notification to the Executive Committee for approval.

Question of Blanket Defense Policy—The general counsel then discussed the matter of negotiating with the insurance carriers for a blanket physician's defense policy covering the members of the Association, desiring it as a group, in conformity with the action of the House of Delegates.

On motion of Pope, seconded by McArthur, it was resolved, that the Executive Committee be authorized to ask for bids on a blanket policy from all commercial carriers licensed to issue and issuing physician's defense policies in California, on the basis of a minimum of 300 risks on behalf of such members of the Society desiring such coverage.

Date of Next Council Meeting—On motion of De Lappe, seconded by Carrington, it was resolved, that when the Council adjourns tonight, it adjourn to meet at the call of the chair in the early part of August.

Report of Committee on Ideal Fee Schedule—The report of the Committee on Ideal Fee Schedule as presented before the House of Delegates was considered.

On motion of De Lappe, seconded by McArthur, it was resolved, that the report of the Committee on Ideal Fee Schedule be referred to the editor of the State Journal.

President's Address—The Council considered the various suggestions of the president as contained in his address before the House of Delegates regarding race betterment and immigration restrictions.

On motion of Kress, seconded by De Lappe, it was resolved, that the president's address be referred to the Executive Committee for consideration and action.

Graduate Instruction for Physicians in General Practice—The question of graduate instruction for physicians in general practice as outlined by Doctor T. C. Routley, general secretary of the Canadian Medical Association, in his address presented before the general session, was discussed.

On motion of Kress, seconded by De Lappe, it was resolved, that the question of graduate instruction for physicians in general practice be referred to the Executive Committee for consideration and action.

Grave of First President—The Council then considered the matter of the neglected grave of the first president, Doctor B. F. Keene.

On motion of Kress, seconded by De Lappe, it was resolved, that the matter of the neglected grave of the first president, Doctor B. F. Keene, be re-

ferred to the Executive Committee for consideration and action.

Bunnell Memorial—The matter of the proposed memorial to Doctor Lafayette Houghton Bunnell in Yosemite Valley was again considered.

On motion of Kress, seconded by De Lappe, it was resolved, that the matter of the proposed memorial to Doctor Lafayette Houghton Bunnell in Yosemite Valley be referred to the Executive Committee for consideration and action.

MINUTES AND PROCEEDINGS OF SECTIONS OF THE FIFTY-SECOND ANNUAL MEETING OF THE CALIFORNIA MEDICAL ASSOCIATION.

(Only part of the Sections have submitted minutes. These are published.)

SECTION ON GENERAL MEDICINE

F. F. GUNDRUM, Chairman
A. S. GRANGER, Secretary

The Section on General Medicine was held in Larkin Hall, Friday, June 22, 1923, at 2 p. m. Meeting called to order by the chairman, F. F. Gundrum. A short address by the chairman and the secretary's report were given. Alfred C. Reed of San Francisco, John V. Barrow and Verne Mason of Los Angeles were appointed by the chair as a nominating committee for the proposal of names for officers of the Section for the ensuing year.

George Knapp Abbott presented a paper on "The Adult Equivalent of the Froelich Syndrome"; discussed by Sansum, Gundrum, and Abbott. Ernest S. du Bray read a paper on "Practical Considerations in the Arrangement of Patients Presenting Essential Hypertension." George E. Ebricht read a paper on the "Etiology of Gastric and Duodenal Ulcers." W. J. Kerr presented a paper on "Heart Failure: Its Underlying Causes, Clinical Manifestations and Treatment"; discussed by Spiro, du Bray, Gundrum and Kerr. Alfred C. Reed gave a paper on "A Clinical Review of Intestinal Protozoa in Stanford Medical School"; discussed by Barrow and Reed. John V. Barrow read a paper on "Ernstine Hydrochloride in the Treatment of Typhoid Fever"; discussed by Wessels and Reed. W. D. Sansum presented a paper on "A Preliminary Report on the Treatment of Diabetes with Insulin"; discussed by Abbott, Gundrum, and Sansum. Willard J. Stone gave a paper on "The Treatment of Hypertensive Muscular Disease." Verne R. Mason read a paper on "Sporotrichosis with Report of a Case." The paper of Henry Herbert on "The Latent Stage of Gall-Stones and Its Early Recognition" was read by title.

The nominating committee reported the names of Arthur Stanley Granger of Los Angeles as chairman, and Ernest S. du Bray of San Francisco as secretary of the Section for the coming year. It was moved and seconded that the nominations be closed and the chairman instructed to cast a unanimous ballot for these men. Carried. There being no further business, the meeting adjourned.

SECTION ON DERMATOLOGY AND SYPHILOLOGY

HOWARD MORROW, Chairman
MOSES SCHOLTZ, Secretary

The Section opened its session at 2:30 p. m., Friday, June 22. There were fifteen dermatologists and five visitors present. Two papers were read and discussed: "Erythema Induratum," by Harry Alderson and H. C. Coe, and "Skin Syphilis Associated with Inflammatory Skin Disease," by Kendal Frost. The other papers of the program were read by title. The clinical session followed. Thirteen patients of interest to dermatologists were presented by Alderson, Chipman, Coe, Culver, Morrow, Taussig, and by Bolm by invitation. The cases were discussed.

The following officers were nominated and elected for 1924: Chairman, Anstruter Davidson, Los Angeles; vice-chairman, Kendal Frost, Los Angeles; secretary, Moses Scholtz, Los Angeles (second term).

The meeting of the Section was characterized by a spirit of live interest on the part of those present, though several members stayed away because of the prevailing impression that no papers were to be read.

SECTION ON GENERAL SURGERY

STANLEY STILLMAN, Chairman
HARLAN SHOEMAKER, Secretary

The fifth annual session of the General Surgical Section was called to order by Stanley Stillman of San Francisco in Larkin Hall, San Francisco, June 22, 1923, at 2 p. m. Following the chairman's address, the minutes of the 1922 session in Yosemite were read and approved. The chairman appointed John Hunt Shepherd, A. S. Lobingier, and Harlan Shoemaker on the nominating committee. R. C. Smith of Los Angeles was nominated chairman; Leo Eloesser of San Francisco, secretary, and LeRoy B. Sherry of Pasadena, assistant secretary for the 1924 session. There being no further nominations, it was moved by C. P. Thomas and sec-

onded by Guy Cochran that the secretary cast the ballot. Carried.

It was moved by C. P. Thomas and seconded by C. F. Zerfing that the scientific papers be read. Carried.

"The Relation of Surgery and Radiotherapy in the Treatment of Malignant Diseases," Rex Duncan, Los Angeles. Read by title.

"Aneurism Simulating Surgical Conditions," Charles D. Lockwood, Pasadena. Read by title.

"Congenital Hypertrophic Stenosis of the Stomach in Infants." Case reports from the Children's Hospital, forty-seven cases reported, Guy Cochran, Los Angeles. Discussion by A. S. Lobingier, C. P. Thomas, Walter L. Huggins, H. W. Edwards, Los Angeles; J. H. Woolsey and Stanley Stillman, San Francisco.

"Some Practical Points in the Treatment of Hand Infections," Carl L. Hoag, San Francisco. Read by title.

"Some Practical Considerations in the Treatment of Fractures," Fred R. Fairchild, Woodland. Discussion by W. C. Chidester, San Mateo; J. J. Crowley, San Francisco, and Guy Cochran, Los Angeles.

"Adenomatous Goiter," E. H. Schneider, Los Angeles. Discussion by J. H. Woolsey, San Francisco; J. K. Ransom, Modesto, and John Hunt Shepherd, San Jose.

"Fallacies and Hazards of Gall-Bladder Surgery," A. S. Lobingier, Los Angeles. Discussion by C. P. Thomas, Harlan Shoemaker, Los Angeles, and Stanley Stillman, San Francisco.

"Diverticula of the Esophagus," John Hunt Shepherd, San Jose. Discussion by D. A. Beatty, San Jose; J. K. Ransom, Modesto, and C. P. Thomas, Los Angeles.

"A Review of Acute Abdominal Conditions in the San Francisco Emergency Hospital in the Past Two Years," Edmund Butler, San Francisco. Read by title.

"Pyloroplasty," J. H. Woolsey, San Francisco. Read by title.

"The Surgical Aspect of Neurofibromatosis or Recklinghausen's Disease," Mark L. Emerson, Oakland. Read by title.

It was moved by A. S. Lobingier and seconded by C. P. Thomas that the secretary be instructed to express a vote of sympathy to Charles D. Lockwood of Pasadena, past chairman of the Surgical Section, on account of his illness. Carried.

It was moved and seconded that the members of the Section extend a vote of thanks to Stanley Stillman, chairman, and Harlan Shoemaker, secretary, for their efforts in making the meeting of 1923 so interesting. Carried.

SECTION ON EYE, EAR, NOSE, AND THROAT

HARVARD McNAUGHT, Chairman
PERCIVAL DOLMAN, Secretary

The meeting was called to order by the chairman, Harvard McNaught, who explained that the present meeting was called as a formality only and would be promptly adjourned out of courtesy to the meetings of the American Medical Association. It was moved by Dewey Powell of Stockton and seconded by Otis Sharpe that the reading of the minutes of the 1922 session be dispensed with. The motion was carried.

The secretary then read the following papers by title:

"Alveola Fistula," Merton J. Price, San Francisco.

"Foreign Bodies in the Bronchi," Chester H. Bowers, Los Angeles.

"History Cards and History Taking," George H. Kress, Los Angeles.

"Acute Suppurative Labyrinthitis," Henry J. Profant, Santa Barbara.

"Cilia in Anterior Chamber of the Eye, with Case History," Otis Allen Sharpe, San Francisco.

It was moved by Dewey Powell and seconded by Hamilton that the present officers be continued in office for another year in order to give them an opportunity to conduct a regular meeting of the Section. The motion carried.

SECTION ON UROLOGY

ROBERT V. DAY, Chairman
LOUIS CLIVE JACOBS, Secretary

The meeting of the Section on Urology took place as per program. Due to lack of time, the majority of the papers were read by title and were handed to Robert V. Day for transmission to the editor.

The following Section officers were elected for the ensuing year: Louis Clive Jacobs, San Francisco, chairman, and Frank S. Dillingham, Los Angeles, secretary.

SECTION ON ORTHOPEDIC SURGERY

G. J. McCHESNEY, Chairman
H. H. MARKEL, Secretary

The Orthopedic Surgery Section met in the Auditorium on June 22, with President McChesney in the chair. The officers elected for 1924 were H. H. Markel, San Francisco, president; E. C. Wilson, Los Angeles, secretary. This arrangement was made so that the secretary, living in Los Angeles, could attend to matters for the next meeting, which will be held in Los Angeles.

Papers were read by James Watkins on "Retropertoneal Glands Assimilating Tuberculosis of the Spine"; by Rudolph Dresel on "Acute and Chronic Synovitis of the Knee Joints"; and by H. H. Markel on "Etiology, Mechanics, and Treatment of Faulty Posture."

SECTION ON OBSTETRICS AND GYNECOLOGY

LUDWIG A. EMGE, Chairman
J. MORRIS SLEMONS, Secretary

There were approximately seventy-five visiting physicians present. The chairman opened the business meeting with a brief address of welcome. The secretary reported the financial status of the Section, as well as the withdrawal of the papers of Lyle McNeile and E. B. Cecil.

It was decided to request the editor of the Journal to publish the symposium on sterility, together with the discussion, as a whole and not split it up into individual papers. It was decided to leave the program for the coming meeting to the new officers.

The officers elected for the coming year are A. B. Spalding of San Francisco, chairman, and Peter O. Sundin of Los Angeles, secretary. Requests for a place on the program for the coming year should be made early and sent to Doctor Sundin.

SECTION ON INDUSTRIAL MEDICINE AND SURGERY

PHILIP STEPHENS, Chairman
PACKARD THURBER, Secretary

The meeting was called to order by the chairman, June 22. The minutes of the last meeting were read and approved.

Report of the Physiotherapy Committee, E. W. Cleary, chairman. Following the presentation of the report, a motion was made, seconded and unanimously carried, that the same committee on physiotherapy be reappointed for the ensuing year. The report was discussed by Gayle Moseley, who recommended that the Section advise the different insurance carriers concerning the recommendations of this committee. A motion was made, seconded and carried that a committee be appointed to make a résumé of the report, have it printed and sent to all companies doing insurance work. The chairman announced that he would appoint a committee at a later date.

Doctor McNeil presented a resolution on industrial medicine and surgery, as prepared by the Industrial Section of the Los Angeles County Society. These resolutions were discussed by Cleary and Moseley, and a motion was made by Moseley that the Section prepare a resolution endorsing these resolutions and present it to the Council of the State Association, together with the resolutions passed by the Los Angeles County Society. Motion was seconded and carried.

Election of officers: Ross Harbaugh of San Francisco was unanimously elected president and W. C. Adams secretary of the Section for the ensuing year.

"The Second Great Type of Chronic Arthritis in Its Relation to Industrial Accident Cases" was presented by Leonard W. Ely. The paper was discussed by McNeil, Cleary, Harbaugh, Mordoff, and Moseley, and the discussion was closed by the author.

Announcement was made by Doctor Cleary concerning the industrial clinics to be held at the hospitals during the A. M. A. convention. A motion was made and seconded that the meeting be adjourned until the next annual meeting.

SECTION ON PATHOLOGY AND BACTERIOLOGY

WALTER V. BREM, Chairman
ROY W. HAMMACK, Secretary

The Section met June 21, with fourteen in attendance. The chairman's address was a discussion of the scarcity and need of pathologists and the problem of their training. The discussion was informal and participated in by Duffield, Addis, Victors, Terry, Geiger, Hammack, and Brem.

Officers elected for the coming year were: President, G. V. Rusk, San Francisco; secretary, Roy W. Hammack, Los Angeles.

The following papers were discussed informally by various members:

"The Clinical Significance of Quantitative Determinations of the Rate of Protein Excreting in the Urine in Bright's Disease," Thomas Addis, San Francisco.

"Torula Infection," Mona E. Bettin, Los Angeles.

"Demonstrating the Tubercle Bacillus," E. A. Victors, San Francisco.

Owing to the fact that many members expected the papers to be read by title only, the other authors on the program were not present.

SECTION ON ANESTHESIOLOGY

E. I. LEAVITT, Chairman
LORRILL A. RETIOWILM, Secretary

There was a meeting of the Section and a number of joint meetings with the regional and national associations.

R. F. Hastreiter, Los Angeles, was elected chairman, and Edwin Forrest Boyd, Los Angeles, secretary of the Section for the ensuing year.

The following resolutions were passed by the Section: Whereas, The safety of human life, the progress of surgery, and the development of hospital service demand the rapid extension of the specialty of anesthesiology; therefore be it

Resolved, That the Section on Anesthesiology of the Medical Society of the State of California hereby commits itself to the development and standardization of such anesthesia service in the hospitals of California, through a standardization committee organized for this purpose; and be it further

Resolved, That no hospital shall be deemed to have

acceptable standards (1) which does not limit the administration of all anesthetics to legally qualified medical and dental practitioners; (2) which charges or collects a fee for an anesthetic, including workmen's compensation and insurance cases, unless such anesthetic has been administered by a legally qualified physician or dentist; be it further

Resolved, That the Section on Anesthesiology of the Medical Society of the State of California condemn as destructive of all safety to human life and the progress of anesthesia, the training or use of nurses or other lay persons as anesthetists;

Whereas, The safety of human life as an issue of public welfare depends upon expert anesthesia in workmen's compensation and insurance cases; therefore be it

Resolved, That the Section on Anesthesiology of the Medical Society of the State of California urges that expert anesthesia by legally qualified physicians and dentists be provided for all such patients, and that fees be allowed commensurate with the risk involved and the service rendered; and further be it

Resolved, That copies of these resolutions be sent to the Industrial Commission of the State of California, all liability and fraternal insurance companies handling operative cases.

SECTION ON TECHNICAL SPECIALTIES

RAY LYMAN WILBUR, Chairman

At the meeting of this Section, Ray Lyman Wilbur, San Francisco, was re-elected chairman, and John C. Wilson, Los Angeles, was elected secretary of the Section for the ensuing year.

The California Association of Physiotherapists

As a member of the Technical Specialties Section of the California Medical Association, this organization held its meeting on June 23.

Election of Officers: Miss Hazel E. Furscott, 240 Schroth building, San Francisco, was re-elected president; Miss Ethel Johnson, 177 Post street, San Francisco, vice-president; Miss Hilda Rodway, 177 Post street, San Francisco, secretary-treasurer. Miss Mabel Penfield, Miss S. Davis, Miss Hilda Knausenberger, and Mrs. Mary Schaaf were elected members of the Executive Committee.

The minutes of the last annual meeting, as well as reports of officers and committees, were read and accepted.

Amendments to the constitution and by-laws were adopted, fixing the time of payment of dues, the time when delinquency becomes effective. An amendment to the by-laws, making them conform in all respects with the definition of physiotherapy as given in the preamble was adopted.

President's Address: In opening the meeting, the president, Miss Hazel E. Furscott, said:

"The California Association of Physiotherapists was organized on May 10, 1921, and incorporated into the California State Medical Society as a member of its Technical Specialties Section. The purpose of this organization is to establish and maintain adequate standards in physiotherapy and to afford the members of the medical profession a group of educated, trained, technical assistants. The central points of the constitution to this effect are that physiotherapy is defined as a group of physiotherapeutic procedures to be prescribed by doctors of medicine and administered under the physicians' direction by especially educated and trained technical assistants, and that as physiotherapy is practically an integral part of modern medicine, physiotherapy should form a unit of the organized medical profession and should become intimately identified with local, State, and National medical associations. At the present time the California Association of Physiotherapists have forty-six active members, of whom seventeen are new this year, and four associate members. Our program has been one of regular monthly meetings with stimulating addresses of scientific interest from such men as Doctors Wilson, Bohrmann, Fisher, Hoag, and Dukes of Oakland, and Miss Penfield and Miss Rodway, physiotherapy technician. Besides our regular activities and those monthly programs, the association has prepared and made available an extensive program composed of papers written by experts, and this extensive program is available to any county society in the State who wishes the program on physiotherapy, and has published in the California State Journal of Medicine articles of interest. To meet the outstanding needs of physiotherapy, that of adequate educational standards, research surveys are in progress on the following subjects: Surveys of schools giving courses in physiotherapy, and a bibliography of physiotherapy. It is the intention of the association to print these surveys as soon as they have been completed. Of course, the bibliography will never be completed, but it will be a working bibliography. The medical profession is but just awakening to the possibilities of physiotherapy. Even in this awakening physiotherapy has been wrongly identified with orthopedics, surgery, and especially industrial medicine. Rightly, it belongs to all medicine. It is a form of treatment along with medicine and surgery, and should be a tool of the general practitioner, the neurologist, the internist, as well as the orthopedic and dental surgeon. It is the application of those physiotherapeutic measures of which we have knowledge, to bring about certain physiological results when, in the opinion of the physician, they are indicated. We feel that we are achieving our purpose when we gather together such a group as this to present a program of such scientific interest and by such eminent speakers

as we have today. May I take this opportunity to thank Doctor Musgrave and Doctor Wilbur, as well as the officers of the Association, the committees, and the members, for the co-operation which they have given to make possible such a program as this?

Miss Lohne, president of the American Physiotherapy Association, was called upon, and said:

"Miss Furscott has stated the aims of the California Association, and they are exactly the same in the National Association. When the California Association invited us to hold a joint meeting with them, we accepted because we felt that they could help us because they had gotten along so wonderfully and we were still struggling along. Our National organization only has one meeting a year, and the members are scattered throughout the whole United States; so it is rather hard to get suggestions and help from them. There are several local chapters in the East and in the Middle West. The California Association is standing by itself, more or less, but having individuals who are members of our organization. That association is a member of the Medical Association, and we are hoping that, by coming out here and learning how they went about it, and getting their co-operation now, and during the A. M. A. meeting, that we can accomplish the same thing for the National organization.

"During the war those of us who went in rather early met the problem of well-trained people. Some doctors, even famous doctors, would say, 'It does not make any difference, we do not need technically trained people because we would rather train our own.' One doctor went as far as to say that he could take anybody and train them. Well, the army discovered that that did not work, and so they have now established a course of physiotherapy, and applicants for that must have had a two years' course before on physical education. They realize that anybody cannot do the work and do it scientifically. Our aim is to try to get schools established that will train people to give the medical profession the very best service, because we know very well that it is economically wrong to have people who are not trained, as well as wrong from the standpoint of the patient. People will say that a patient is improving under physiotherapeutic treatment very well, but they have no idea what the treatment might accomplish if administered by adequately trained technicians.

"And so we came out here this year, hoping that the doctors would give us the co-operation that we need and the boost that we need to go ahead. We have about 250 members. Each one of those members is anxious to see the National Association united in some way with the American Medical Association and working under their direction. Otherwise, aside from that, the aims of our association are just exactly the same as those of the California Association, and I am going to leave the rest of our troubles until the business meeting, so that we can call on the speakers of the afternoon and hear their papers, and not trouble you with the trials that we are now working under."

JOINT ANNUAL MEETING OF THE AMERICAN PHYSIOTHERAPY ASSOCIATION AND THE CALIFORNIA ASSOCIATION OF PHYSIOTHERAPISTS.

The scientific and technical program on physiotherapy was given before a joint meeting of the National and State associations. The meeting was attended by a large and interested audience, and the program probably has not been excelled by any meeting anywhere. The first speaker, Doctor Joel Goldthwait of Boston, had as his subject, "How to Keep Ourselves Fit." He said in part:

"The medical profession is gradually coming to understand that there is something in posture treatment. They do not know quite what, and they do not know how to get away with it; but it is a thing that they should be paying some attention to, and they are sending their patients more and more to physiotherapists, expecting that you, in some way, will make them fit. The responsibility is upon you more than it should be, many times, but that is due to the ignorance of some of my profession.

"The textbooks on anatomy teach that there is one human type. This is not a fact. The athletic trainer, from time immemorial, has known perfectly well that there were a lot of types, as well as there are among all the lower animals. You have your race horse, and you have your truck horse at the other end of the line, and you have the family horse in between. In the human family you have exactly the same variations, and you expect entirely different physical reactions from each. That is the thing everyone should understand, my profession perhaps more than any other group, and yet my profession understands it apparently less than any of them at the present time, judging by the way medicine is being taught today.

Tait McKenzie of Philadelphia discussed "The Place of Manipulation and Corrective Gymnastics in Treatment." This paper will be published in the California State Journal of Medicine.

"Physiotherapy in Relation to Orthopedic Problems of the Shoulder, Girdle, and Arm" was the subject of a paper by C. LeRoy Lowman of Los Angeles.

"The Place of the Physiotherapist in the Treatment of Infantile Paralysis" was discussed by John C. Wilson, Los Angeles.

Both these papers will be published in the Physiotherapy Review.

COUNTY NEWS

[As many of the County Medical Societies are not holding meetings during the summer months and the county officers are on their vacations, few reports have been sent the Journal, but it is hoped that, beginning with October, we will be able to give our readers interesting news each month from every county in the State.—Editor.]

MONTEREY COUNTY

Monterey County Medical Society (reported by T. C. Edwards, secretary)—The Monterey County Medical Society had its regular meeting at Hotel Jeffery on August 3, 1923. There was a good attendance to hear Wm. C. Voorsanger of San Francisco talk on "The Sane Treatment of Tuberculosis." The doctor pointed with pride to the improvement in the results of treatment within the last twenty years. He called attention to the absolute necessity of having full co-operation of the patient. The psychology of the patient has a great deal to do toward the success of treatment. The talk was illustrated with numerous X-ray pictures.

Monterey County Medical Society feels that it has been losing greatly in the past by failing to avail itself of the services of this really post-graduate staff whereby we get the best at home without having to take the time and expense to visit the cities where it would be necessary to go to obtain what we are getting just for the asking. Dr. Voorsanger's talk inspired us with the feeling that we wanted all of this service that it is possible to get.

The Monterey Society also held a meeting on June 3rd, in Salinas. The event of the evening was an illustrated paper by A. B. Spalding of San Francisco on "The Pelvic Fascia, Its Injury During Labor, and Repair of Injuries." The paper was profusely illustrated by lantern slides which made plain some of the points that would have been somewhat hard to understand without the use of the lantern. A general discussion followed. Numerous questions were asked and were answered by Dr. Spalding. A vote of thanks was tendered Dr. Spalding, and the meeting adjourned with all feeling that they were more than paid by being present.

SAN DIEGO COUNTY

San Diego County Medical Society (reported by Robert Pollock)—The new 100-bed addition to the Paradise Valley sanitarium is now rapidly filling up with patients and is relieving the congested condition of that institution.

The San Diego county general hospital announces the following internes for service beginning July 1, 1923: Dr. Nies, graduate of the College of Medical Evangelists, Los Angeles; Dr. Paez, graduate of Rush Medical College, Chicago; Dr. Duncan, graduate Medical Department University of Indiana; Dr. Leland, graduate College of Medical Evangelists, Los Angeles; Dr. Clark, graduate Jefferson Medical College, Philadelphia.

The hospital has just installed complete a new high pressure sterilizing outfit in the surgical department. The X-ray department has been improved by the addition of a new Wappler transformer and cabinet.

The Board of Supervisors has recently bought a model dairy farm of about 110 acres on which they will erect proper buildings for the housing and care of the indigents now cared for in the hospital. This will release considerable space for legitimate hospital purposes.

The Board of Supervisors is also planning extensive improvements about the grounds and approaches to the hospital, including boulevarding and parking

of a beautifying character and the paving of drive-ways from the nearest street-car lines. The board has also recently installed new concrete tennis courts for the use of the internes and nurses.

The medical profession of the county is happy in having the co-operation of so intelligent and efficient a Board of Supervisors. About a dozen young women are already enrolled for the freshman class in the training school, taking up their work in September.

SAN FRANCISCO COUNTY

San Francisco County Medical Society (reported by J. H. Woolsey, secretary)—The following resolution was passed by the board of directors of this society:

Whereas, It has been announced in the public press that the removal of Dr. Morton R. Gibbons from the position of Medical Director of the Industrial Accident Commission of the State of California is imminent; and

Whereas, Dr. Morton R. Gibbons has filled this office to the perfect satisfaction of the people and of the medical profession of the State of California; and

Whereas, No reason, other than political, can be shown for his removal; therefore be it

Resolved, That we, the board of directors of the San Francisco County Medical Society, acting for its eight hundred members, emphatically protest against his removal; and be it further

Resolved, That a copy of these resolutions be telegraphed to every county medical society in California, and that they be printed in the California State Journal of Medicine, and that copies thereof be furnished to the public press.

Diagnostic Clinics at St. Joseph's Hospital—Undoubtedly the most vivid impressions which linger at St. Joseph's Hospital of San Francisco concerning the convention of the American Medical Association are those left by the diagnostic clinics in this institution on June 25 and 26. The object of these clinics—namely, that they be participated in by local and visiting fellows—was steadfastly adhered to.

Surely it is inspiring for the physicians at St. Joseph's Hospital to view the demonstrations of the national celebrities, and many of the outside medical visitors expressed commendation at the showing of the hospital's representatives. Sisters and lay nurses also evinced a lively interest, and even standing room at times was at a premium.

On Monday, June 25, at 10 a. m., J. M. Wolfsohn of the hospital staff opened with a talk on neurological manifestations in encephalitis lethargica, and demonstrated three patients showing the Parkinsonian syndrome and mirror writing. Lantern slides were also shown. Ethan Smith next spoke on congenital dislocation of the femur, infected gumma of the tibia, and the use of absorbent cotton instead of cotton sheeting, in bone work, presenting radiograms and patients. Lloyd Crow discussed the early diagnosis of phthisis by X-ray of pulmonary glands, and W. T. Cummins spoke briefly on insulin therapy in diabetes. J. R. Pennington of Chicago, chairman of the section on proctology of the A. M. A., closed with a unique lecture on a new method of diagnosis and treatment of rectal diseases, illustrated with scores of lantern slides, many of which were in colors. Luncheon was served to all present.

Tuesday, June 26, George Dock, dean of national clinicians, opened the clinic by demonstrating patients with heart lesions and mediastinal tumors, with X-ray pictures, assisted in his illuminating talk by Wm. Reilly. Wm. Quinn read a paper on surgical problems. L. W. Bremmerman, director of the Urological Hospital of Chicago, discussed diagnosis in his specialty and demonstrated a number of patients, being assisted by Alex. Raymond. The next day, L. W. Bremmerman gave a cystoscopic

clinic. Col. Allen Greenwood of Boston, who was chief eye consultant in the world war, closed the Tuesday program with a talk on "Ophthalmological Pointers," being assisted by Roy Parkinson. Luncheon was then served by the Sisters.

A. S. Musante, head of the hospital staff, presided at the clinics and received expressions of appreciation from the visiting and local doctors of the excellent demonstrations presented.

Variety in Program of St. Joseph's Hospital Staff—On August 8, St. Joseph's Hospital of San Francisco held its regular staff meeting, Dr. A. S. Musante presiding, and Dr. H. Unsinger acting as secretary.

"Meingism and Meningitis" was presented by Harry Deering and discussed by Anna Lyle (the pediatric and typhoid aspects), C. O. Southard (the aural significance) and H. V. Hoffman (the pathological lesion). Interesting case reports were presented by C. E. Taylor (post-operative dilatation of stomach and hemolytic streptococcic pyemia after tubercular adenectomy) and Andrew Nagy (streptococcic infection of hand). F. C. Keck donated several volumes to the library, which was also further enriched by purchases by the staff. H. Unsinger was appointed librarian.

R. C. Kupler, surgeon of St. Anthony's Hospital of Chicago, one of the many institutions operated by the same Sisters here, was a guest of honor, and spoke on staff organization, diagnostic blood culture and walling off of abscesses. Refreshments were served.

Resolutions were adopted in praise of the recent American Medical Association convention, especially the diagnostic clinics and the hospitality of the Sisters, and complimenting Ray Wilbur and W. E. Musgrave upon their election as president and vice-president, respectively, of the organization.

SOLANO COUNTY

Solano County Medical Society (reported by A. V. Doran, secretary)—At a meeting of the Solano County Society, July 31st, the following officers were elected: Dr. S. G. Bransford, president, Suisun; Dr. Ralph Allen, vice-president, Vallejo; Dr. A. V. Doran, secretary-treasurer, Vallejo. New member, Dr. A. G. Bailey of Suisun.

Trustees of A. M. A. Thank California Medical Association For Successful Session in California—The following letter was received from Frank Billings, Secretary of the Board of Trustees:

I am directed by the Board of Trustees of the American Medical Association to extend to you and to the other members of the Local Committee of Arrangements of the Seventy-fourth Annual Meeting of the Association held at San Francisco, California, June 25-29 inclusive, the deep and sincere appreciation of the Board for the splendid, efficient, and practical accomplishments of your committee.

The San Francisco session of the Association was a great success in the business, scientific, and social accomplishments of the meeting.

Please accept for yourself and extend to the members of your committees the appreciative thanks of the Board for the splendid arrangements made for the meeting by your committees and for the resulting successful session of the Association.

Annual Convention of the American Roentgen Ray Society—Among the forthcoming meetings of special societies is the annual convention of the American Roentgen Ray Society. This is to be held in Chicago with headquarters at the Congress Hotel, the time of the meeting being from September 18 to 21. A number of eminent foreign contributors will appear on the program, and the announcements indicate that treatment by high voltage X-ray will have a prominent place on the program.

Utah State Medical Association

J. R. MORRELL, M. D., Ogden - - President
 WILLIAM L. RICH, M. D., Salt Lake - Secretary
 W. R. CALDERWOOD, M. D., Associate Editor for Utah

REPORT OF THE TWENTY-NINTH ANNUAL MEETING

The Twenty-ninth annual meeting of the Utah State Medical Association was held at Salt Lake, June 20, 21, 22, 1923, and the program as previously published was carried out. The report of the House of Delegates, including the reports of officers and special committees, is given below:

Noon Meeting, June 20

Meeting called to order by the President, J. C. Landenberger, at 1 p. m.

Roll call of House of Delegates—quorum present.

Minutes of 1922 session were not read inasmuch as a complete report had been printed in Northwest Medicine.

The president appointed F. A. Goeltz, chairman, F. F. Hatch and F. H. Raley as a Reference Committee to pass on all reports of officers and committees.

REPORTS OF OFFICERS

Report of the Secretary, William L. Rich

Since our last annual meeting there have been some important things accomplished by our National organization. Of these, one requires special notice at this time, and that is the organization and publication of a lay medical journal. This magazine is known by the name of "Hygeia" and the subtitle "A Journal of Individual and Community Health."

The editors are the highest type of men in the profession and some of the foremost writers and contributors to medical literature in this country, chief among whom is Dr. Victor C. Vaughn, Ann Arbor, Michigan. His name is known wherever scientific medicine is practiced and wherever preventive medicine has received any consideration. Today these men are busily engaged in translating and simplifying progressive scientific medicine into the language of the laity. Practically all of us at various times are called upon to speak before lay audiences. There never has been in the history of medicine, to this date, a magazine so wonderfully well adapted to assist one in this kind of an endeavor. The articles on hay fever and the mosquito problem in the May issue are of intense interest to both medical and lay readers. I know of no journal or text book where one can get the simple truth so easily and precisely as set forth in this journal.

At the last annual meeting of the secretaries of the component State associations where "Hygeia" was first outlined and announced by Dr. Vaughn, many of the secretaries, in acknowledging Dr. Vaughn's great work, pledged themselves to secure ten subscriptions from each member of their State Association. The secretary from Utah was reticent about making any such promise. In fact, I do not believe I am overestimating when I say that probably not more than a third of our members are even subscribers themselves, much less have secured ten patient subscribers. It is my opinion that we are far behind the other State Associations in appreciation of this magazine and what it will mean to our profession. It is destined to be our strong right arm and our most powerful weapon in combatting quackery and the cults, and unfair and biased treatment in the halls of the legislature, as well as unjust industrial medicine. Every physician and dentist, librarian and school teacher should, for his own good, have a copy of this Journal on his library table.

One other important event in the National organization is the establishment of a bureau of legislation. Dr. William C. Woodward is the chairman. He has a keen legal mind and is recognized as one of the foremost teachers of medical jurisprudence. This department is yet somewhat in the experimental stage; but I trust that we shall finally request and receive medical defense through its functioning.

Every one of you, I am sure, senses the relief it would afford us in this State at the present time if we knew definitely that we might receive proper defense in liability insurance at practically the actual cost of that defense, through a national organization that was strong and powerful. Insurance companies have made and accumulated millions doing this for us, and it now appears they are ready to raise the price so high as to make it almost prohibitive or leave the field entirely. This year there has been appointed a special committee, known as the Committee on Professional Welfare and Ethics, to consider and make recommendations on this problem. I might add that this committee has been wide awake and active and will give you their detailed report.

Our many years' experience with the legislature has not profited us much in ideal legislation and yet there has been something accomplished. The mills of justice grind slowly, skipping a number of cogs at times and letting in a little pollution. The past session of the legislature left us with an organic lesion which, I hope, will not prove serious, and may be compensated for by the unjust bills that were attempted and blocked through the efforts of the Committee on Public Policy and Legislation and their supporters.

The number of component County Societies is six, the same as last year. One of these was suspended for nonpayment of dues and inertia; re-organization and recovery was complete and they are now in good standing. The following table sets forth the details of membership by counties as compared with last year:

Cache Valley	17—a decrease of 3
Carbon County	17—an increase of 2
Salt Lake County	200—same as last year
Uintah County	7—an increase of 1
Utah County	31—a decrease of 5
Weber County	44—an increase of 5

making a grand total of 316, the same as last year.

There has been closer co-operation between the majority of the component county societies this year than ever before. To the president of the Salt Lake County Society is largely due the credit for arranging meetings of the officers of this association with Weber County and Utah County, and inviting these county societies to be the guests of the officers of both the local and State Associations at dinners, and at the regular meetings of the Salt Lake County Society. If the regular meeting had come in the fall, as is usual, I am sure we could have reported a visit to Cache Valley and Carbon County Societies, as that was our intention. This practice should be encouraged and the Secretary recommends that the officers of this Association visit all component County Societies at least once a year, with the possible exception of the Uintah County Society.

You are all aware of the action taken at the last meeting of the House of Delegates regarding the advisability of transferring our State journal from Northwest Medicine to California State Journal. The matter was placed by this body in the hands of the Council to complete arrangements and the transfer is now about completed. We shall begin with the August issue of the California State Journal and our papers and transactions will be published in that journal this year and each member in good standing should receive a copy of that journal each month. The president, on the advice of the Council, has appointed Dr.

W. R. Calderwood to act as associate editor for the coming year.

The amendment to our by-laws regarding a president elect is to be voted on, the notice having been published twice—once in Northwest Medicine and in the present program.

The following officers are to be elected: president, and three vice-presidents, president-elect; secretary, three-year term; treasurer, councilor from the First District, three-year term.

Report of the Treasurer, F. L. Peterson

From September 1, 1922, to June 20, 1923

Receipts

1922		
Sept. 1—Balance in bank	\$	400.86
Sept. 2—From Harlow Brooks Course.....	\$	650.00
Oct. 19—Utah County Medical Society.....		24.00
Oct. 19—Banquet Committee		4.00
Nov. 11—Salt Lake County Med. Society.....		120.00
Dec. 20—Salt Lake County Med. Society.....		80.00
1923		
Apr. 2—Salt Lake County Med. Society.....		800.00
Apr. 2—Cache Valley Medical Society.....		136.00
May 3—Utah County Medical Society.....		56.00
May 3—Utah County Medical Society.....		240.00
May 3—Weber County Medical Society.....		360.00
May 11—Salt Lake County Med. Society.....		712.00
May 12—Carbon County Medical Society.....		40.00
May 12—Carbon County Medical Society.....		48.00
June 11—Carbon County Medical Society.....		32.00
June 13—Carbon County Medical Society.....		8.00
June 19—Salt Lake County Med. Society.....		48.00
June 19—Coupons from bonds.....		12.75
	\$3,370.75	3,370.75

Total Receipts for the year.....\$3,771.61

Disbursements

1922		
Sept. 23—Northwest Medicine, 12 members from Carbon Co.	\$	12.00
Sept. 26—Hotel Utah, expenses of guests.....		43.30
Sept. 27—Harlow Brooks Fund, trans. to savings account No. 22697, at 4% interest.....		650.00
Oct. 5—Gardiner Printing Co., 200 tickets.....		3.00
Oct. 12—Gardiner Printing Co., 750 letterheads.....		10.75
Oct. 12—Billings Stenographic Service, copying 3 medical papers Harlow Brooks, reporting meeting, political letters, Hurd's paper, etc.		100.72
Oct. 12—Pembroke Co., tags.....		1.90
Oct. 12—F. L. Peterson, salary, stamps, stationery, etc.		27.75
Oct. 16—Wm. L. Rich, salary, stamps, phones, trip to Logan—Council		197.33
Oct. 25—Utah Savings & Trust Co., 200 checks printed and bound, 2 volumes.....		20.00
Oct. 27—Salt Lake Stamp Co., changing seal.....		3.50
Nov. 7—F. G. Dust Co., binding 6 records of transactions of Utah State Medical Association		10.50
Dec. 11—Billings Stenographic Service, letters.....		14.17
Dec. 19—James H. Wallis, legislative work.....		100.00
1923		
Jan. 17—Billings Stenographic Service, miscellaneous		27.17
Jan. 17—Century Printing Co., 500 lists of legislators		9.50
Jan. 22—Earl M. Crandall, surety bond.....		2.50
Apr. 2—James H. Wallis, work in Legislature.....		200.00
Apr. 2—Cheney, Jensen & Holman, law work on Medical Practice Act.....		150.00
Apr. 2—Billings Stenographic Service, March invoice		58.56
Apr. 2—Ray & Rawlings, legislative work, Medical Practice Act.....		150.00
May 26—Billings Stenographic Service, May invoice		32.14
June 4—Gardiner Printing Co., 700 programs.....		57.50
June 16—Billings Stenographic Service.....		24.30
June 16—Northwest Medicine, subscription six months for 297 members at \$1 per year		148.50
June 16—Gardiner Printing Co., 200 tickets.....		2.50
June 16—Weber County Medical Society, refund dues for Dr. Wach.....		8.00
Total Disbursements	\$2,073.59	

Recapitulation

Balance on hand in bank Sept. 1, 1922.....	\$	400.86
Receipts from Sept. 1, 1922, to June 19, 1923		3,370.75
Total Receipts	\$3,771.61	
Disbursements from Sept. 1, 1922, to June 19, 1923		2,073.59
Balance in bank June 19, 1923.....	\$1,698.02	
Harlow Brooks Fund in Savings Account No. 22697	650.00	
Total in savings and checking accounts.....	\$2,348.02	

I also carry for the association three \$100 bonds of the Second Liberty Loan of the United States, converted 4½ per cent Gold bonds of 1927-1942, with coupons attached, from November 15, 1923, to November 15, 1942.

Report of the Council, G. L. Rees, Chairman

Since our meeting of a year ago the Council has met in Salt Lake City four times. At these meetings many matters pertaining to the welfare of this Association were discussed and the major part acted upon.

The following are considered of sufficient importance to deserve special mention:

1. At the present time our fiscal year begins in April, while that of the American Medical Association begins in January. Therefore, we suggest that, beginning January 1, 1924, this Association should make their fiscal year correspond to the calendar year, even though at a cost of confusion for one year. By so doing we not only conform to the wishes of the American Medical Association, but simplify matters for our own secretary.

2. At our last State meeting it was suggested we use the California State Journal of Medicine as our official organ, instead of Northwest Medicine. The House of Delegates referred this matter to the Council to investigate, with power to act. After much deliberation we have unanimously decided the best interests of the members of the Utah State Medical Association can be obtained through the adoption of the California State Journal of Medicine, which is recognized as an ideal medical journal, and was so exhibited at a recent meeting of the American Medical Association. Therefore, commencing with August of this year, you will receive your first issue of this magazine.

With this change goes also the appointment of an associate editor, and, after counsel with your president, we have chosen a man whom we feel will fill this position in a creditable manner for this Association, and we trust the secretaries of the component county societies will feel free to furnish the associate editor with all locals which will be of interest to the medical profession.

3. There seems to be a few members of the Association who do not understand that Northwest Medicine, or from now on the California State Journal of Medicine, comes without expense to everyone who pays his or her State dues. Some not knowing this have left the paper in the post-office to be returned, feeling that if they accepted it they would later receive a bill for it. If it should be you are not receiving it, communicate with the secretary of the State Society at once.

4. The Council urges the adoption of a resolution by the House of Delegates, as suggested by Dr. William E. Woodward of the Bureau of Legal Medicine and Legislation of the American Medical Association, voicing our objection to the education of our ex-service men in chiropractic and other cultism at government expense.

5. The House of Delegates, acting on the recommendation of the Committee on Public Policy and Legislation, provided \$1000 for legislative matters by the increase of annual dues. Of this amount about \$750 has been expended, the largest items being as follows:

(a) For services in aiding the adoption of proper amendments to the Medical Practice Act and helping to defeat any and all acts antagonistic to the best interests of the medical profession of the State.....\$300.00

(b) According to your wishes, the proposed amendments were subjected to the criticism of two of the leading men in the legal profession to see if they would be constitutional if adopted. These two men, namely, Attorney Rawlins and Judge Stevens, were paid \$150 each, a total of..... 300.00

(c) For stenographic and clerical work, circulars, etc. 150.00

Total.....\$750.00

As you are aware, the bill passed is not by any means an ideal bill. Had we not made the expenditures enumerated above, conditions might have been even worse.

SPECIAL REPORTS BY COUNCILORS

Hughes of the Third District reports all societies under his jurisdiction as working in harmony. Hampton, of the Second District, reports all active, harmonious, and progressive. G. L. Rees of the First District reported that the constituent societies have had a successful year. The Cache Valley Medical Society in general, and I in particular, resent the report given by the chairman of the Council of a year ago, and which report was accepted by the House of Delegates, for the following reasons:

1. It was a personal report given by an individual member of the Council, never read to other members of the Council, nor were we asked to concur in the report.

2. That the by-laws of this Association distinctly state that each councilor shall report the condition of his own district, a right denied the councilor of the First District, even the right to file a minority report.

3. That the charges made against the Cache Valley Medical Society are not facts but prejudices of the mind.

4. That only evil can come from such a report, for it is only aimed to create contention between the State Association and a component society.

5. That before any suggestion is made to withdraw any society's charter it should be accorded a proper hearing, and if it is not satisfied with the decision it still has the right to appeal to the Council of the American Medical Association.

Cache Valley has an enrollment of 87½ per cent of all physicians in the valley, only three physicians not being members. One of these three has never applied for membership, one was denied admission, and one was expelled for unethical conduct after having twice been admitted.

Cache Valley has good meetings, high average attendance, programs of the very best scientific type, the very highest ideals ethically and professionally; in fact, we deem it an honor to belong to the Cache Valley Medical Society, for to do so signifies that we are in every respect men. If you are in doubt as to this, ask the members of this Society who have visited our society and read papers before it during the last two years.

President Landenberger gave a short oral report, covering three items that are at present prominent with the Association:

1. Malpractice suits.
2. Political situation.
3. Education of the public.

He stated that malpractice suits have increased greatly, and our witnesses may have a serious effect in increasing them still more; that Dr. Kirtley, the chairman of the Committee on Professional Welfare and Ethics, would report this item in detail.

Political Situation: Three important things—first, the interpretation of the present law by the State; second, enforcement of the present law by the State; third, what our political course should be in the future.

Our Legislative Committee should be increased—three men not enough; there should be a dozen, and he suggested that the house do something to enlarge the committee.

REPORTS OF COMMITTEES

Committee on Public Policy and Legislation, G. W. Middleton, Chairman

Your committee began early in the season to hold meetings, and put forth a great deal of effort to have the bill of the previous Legislature so amended that it would be constitutional. Competent attorneys were employed to draw up the bill and to analyze it in detail, that we might not find ourselves defeated again by defects which would raise the question of constitutionality. Letters were sent out to many prospective Representatives and Senators to learn their views in advance, and letters

were sent to each State Association to learn what their experience had been with medical legislation. Nearly all of these letters were answered, and it seemed that the prospects were good to accomplish what we wanted.

A competent man was employed to follow the bill through, and many meetings were arranged with committees of the House and the Senate; in fact, a great effort was put forth by your committee to carry out the wishes of the State Association.

From the first we found ourselves confronted by a large lobby, which carried on the opposition fight with great zeal. Telegrams poured in from reputable citizens in every direction, and under the influence of this popular demand we found legislators on whom we had banked swayed to the side of the so-called drugless healers and ready to agree to any compromise that would meet the popular demand.

Out of the wreck of the plan we were trying to work through for the benefit of all, there materialized a bill which gives each of the main cults their own examining board, but which establishes certain standards of education graduated according to the years of graduation. For all these cults which received certificates of training in their particular institutions since March 4, 1907, a preliminary four-year high school course is required, and if graduated after January 1, 1917, an additional year of college work is added. The actual hours of study for the various drugless healers in institutions teaching their particular system are graduated upward until the year 1926, after which they will all have to show certificates of a four-years' course.

Your committee regrets they cannot make a better showing in the line of this important duty which you entrusted to them, but at the same time we assure you that we put forth an heroic effort to do our full duty.

Sub-Committee on Public Policy and Legislation, John Z. Brown, Chairman

This sub-committee was appointed to assist the general committee in its work with the public and the Legislature in bringing about the present Medical Practice Act. The new law takes the regulation and enforcement of this act out of the hands of medical men and places it under an impartial board with a director of registration in charge. While there are features in this law that are not desirable, we feel that a great deal was accomplished.

Because of the persistent activity of healers and cults, our observation has been that the public and the members of our lawmaking bodies always look with suspicion on any public health measure that is sponsored by the medical profession. Every year bills are introduced in the Legislatures of the different States to place the uneducated healer on a par with the physician. When the healer finally receives State recognition he will not stop. He will assail and attack the established institutions that now protect the people, such as vaccination, and county and State health departments. Scientific medicine is always being assailed. Some say it has a heavy and constant burden to carry.

In the midst of all this contention we sometimes wonder if it would be a good thing for us to use our influence to abolish all medical practice acts and all medical laws that are now on the statute books, and let the people have what they want. In the meantime, we can limit our activities solely to the education of the public in health matters which so vitally concern them.

Report of the Committee on Arrangements, W. N. Pugh, Chairman

The Arrangement Committee wishes to state that arrangements for the annual banquet have been made with the Hotel Utah. Every courtesy and accommodation possible has been extended, and we are sure they will do their best to take care of us.

REPORTS OF SPECIAL COMMITTEES

Committee on Education and Post-Graduate Work,
H. L. Marshall, Chairman; A. C. Callister and
T. A. Flood, Members of Committee

Your present committee on graduate work was very favorably impressed with the short course given under the auspices of the State Society last year by Harlow Brooks of New York City. It seemed advisable to perpetuate the practice as established last year, and arrangements are now well under way for another clinical course of a week's duration to be held in this city during the latter half of August. It was at first believed that a time just before or immediately after our local convention would be opportune. But further thought convinced us that many of our members would be getting ready to leave for, or would just be returning from, the national convention, and it was decided to conduct the graduate instruction during the quieter time of late August. Specific announcement of all details will shortly be mailed to all members of the Society. In looking forward to the problem of graduate work in the future, we believe that the field is immensely important and practically unexplored. There is probably no other branch of science moving faster today than medical science. And there is no branch of science in which the participant has greater need to keep fully abreast of the field. The accepted and probably the best means of doing this for the physician is by going frequently, perhaps yearly, to the great medical centers for instruction.

But because of our isolation, medically speaking here in Utah, and the trying nature of a physician's work, it is safe to say that the average practitioner does not and probably cannot keep pace with the art and the science of medicine by this means. Some partial substitute must be sought. And naturally, when any considerable body of people finds it impossible to go to education, the first alternative is to bring education to them.

Precisely this is being done on a large scale in connection with other highly specialized fields, and the machinery for doing it in most States is well established in our large educational institutions. This in our opinion is the way in which the matter may well be handled here in the future. A State medical society is not primarily an educational institution, nor is it specially organized to conduct courses of instruction. Better than anyone else, however, it does know what instruction it wants. The State University is an educational institution, organized for instruction, and is already carrying instruction of a general nature to thousands of people, and highly specialized instruction to many technical groups. Furthermore the University of Utah is an integral part of the State machinery, maintained to serve the educational needs of the State, and is not in the business for a profit. It seems entirely feasible in the future for the Committee on Graduate Work of the State Medical Association to act in an advisory capacity with the State University in planning graduate instruction in medicine during the summer months, not only in Salt Lake City, but in any community within a day's travel where an enrollment of a dozen to fifteen men can be secured. The services of some of the best clinical teachers of medicine in the country could probably be enlisted for the work. Many such men are on a full time teaching basis at the large medical schools and are comparatively unoccupied during the summer months. The three larger cities of Utah—Salt Lake, Ogden, and Provo, for instance, are so situated that a course meeting every third day might given simultaneously by one instructor, and later, cities farther out might be included as the required number is secured.

Your committee understands that the University is ready and willing to develop such a plan with the approval and co-operation of the State Association, and is willing also to undertake the finan-

cial responsibility. Those of you who have read the issue of the Journal of the American Medical Association for June 9, 1923, will recognize the fact that many of the foregoing suggestions are already being worked out in the State of North Carolina by the State University and the medical profession. North Carolina has gone further in this respect than any other State in the Union. It so happens that the Director of Extension here at our own State University has been in close personal touch and conference with the Director of Extension at the University of North Carolina while the plan there has been developing. Investigation in the direction of the foregoing suggestions is heartily recommended to the State Association and to its incoming Committee on Graduate Work.

President Landenberger stated that George Thomas, president of the University of Utah, in his talk at the Scientific Session this morning, had brought up a very important matter—that of the Medical School of the University. President Thomas said:

"Gentlemen of the Utah State Medical Association: I am very happy to meet with you this morning, and it is unnecessary for me to say to you that you are right welcome here on this campus. We are happy to have you with us, and we want to do everything we can to make your sojourn here pleasant. If things are not to your liking, if you will only say the word, we shall be glad to make them so.

"I am going to take the few minutes allotted to me to discuss with you the question of the Medical School of the University of Utah. The Utah Medical School has received considerable criticism from the medical fraternity of the State. Some of this may have been justified, but we are now reorganizing, with a view of overcoming as many of these just criticisms as we can. I know that many of you feel that the Medical School of the University should be abolished. I myself shared in that feeling, and last winter went to Chicago to interview the officers of the Council on Medical Education, with a view of obtaining a recommendation that the school be closed. Instead of supporting such a program, Dr. Bevan and Dr. Colwell opposed closing the school. On the contrary, they urged that we look forward in the near future to the establishment of a four-year medical school.

"So if this school is to continue, it will be because the officials of the American Medical Association are urging that the school continue. And I feel that if your officials urge such a program that we have a right to ask the doctors of the State of Utah to support us in such a program. I ask you gentlemen, in the course of your business transactions, to appoint an educational committee to investigate the school and make such recommendations as they feel necessary in order to make the school what it should be.

"We should co-operate. We want to open these laboratories to the use of the doctors of Utah. This is your school, as citizens of the State, and I feel it is your duty to co-operate with us to make it a satisfactory institution, so that you can encourage the boys of the State to do their first two years' work here. If we cannot make the school such as to receive the support of the majority of the doctors of this State, then it appears to me that there is only one thing to do and that is to close it up. I believe, however, before that thing is done, and in view of the fact that it is your officials who are urging that the school be kept open, that we are entitled to your co-operation, so that we can have you work with us to do the best we can before we consider discontinuing it.

"We are spending nearly a thousand dollars a student in the maintenance of this school. We should have more money, but it is impossible for us to get it if you men scattered throughout the State assume an unfriendly attitude toward the in-

stitution. May I ask, therefore, for your co-operation and friendly criticism and the appointment of an educational committee, so that they can go over the work with a view of improving it and making it better? I am satisfied that if we will get together on it, we can make the institution such as you gentlemen will be willing to support.

"In closing, may I again repeat that you are welcome to our campus. We want to do everything that we can to make it pleasant for you, and we invite you to return again next year."

President Landenberger: In reference to President Thomas' report, I believe that we ought to do something immediately. Upon unanimous consent, the president appointed the following as a committee to confer with President Thomas: R. R. Hampton, chairman; F. A. Goeltz, H. P. Kirtley, Clarence Snow, J. R. Morrell, E. F. Root, and D. C. Budge. The president urged the component county societies to see that their delegates or alternates were all present. Whereupon, the meeting adjourned, upon motion duly made, seconded, and carried.

HOUSE OF DELEGATES

June 21, 1923. Meeting called to order at 1 p. m. by President Landenberger.

Roll call of House of Delegates; quorum present.

President Landenberger announced that reports not given yesterday would be given at this meeting.

Committee on Health and Public Instruction, F. H. Raley, Chairman

The Committee on Health and Public Instruction reports that it has held no meetings during the past year. The reason for not calling this committee together is that there were so many other committees engaged in similar efforts, it seemed to the chairman a duplication of effort for this committee to attempt any program.

Report of Committee on Necrology, D. L. Barnard, Secretary

(Read by the secretary in Dr. Barnard's absence.)

The Association is to be congratulated that no more of our number have passed to the beyond since the last report of the Committee on Necrology.

Albert S. Bower died March 31, 1923, in California, at the age of 67. Dr. Bower was born in Indiana in 1852. He was graduated from Jefferson Medical College in 1882 and was licensed in Utah in 1893. Soon after coming to this State he became associated with Dr. Hamilton, once a famous figure in Salt Lake. He was intimately connected with St. Mark's Hospital, for years filling a staff position. He was the sixth president of the Utah State Medical Association, serving in 1900. Most of you remember Dr. Bower's untiring activity, which, indeed, was a happy qualification for one following his chosen specialty of obstetrics.

About two years ago Dr. Bower discontinued his practice in Salt Lake and moved to California, where he lived to the time of his death. For the past two years Dr. Bower has not been a member of this State Association, but he was one of us for so long and was so well known that we beg leave to present the following resolution:

Be it resolved, that the Utah State Medical Association desires to express its regret over the passing of its one-time president, Dr. Albert S. Bower. His genial personality, his intense activity, his interest in his work, are traits that stamp him not dimly upon our memories. But, perhaps, his most pleasing characteristic was his friendliness toward young physicians, and many may be here who remember words of encouragement extended them in their beginnings by this our friend.

To his family this Association extends its sympathy, and our secretary is hereby instructed to communicate this resolution to them and to spread same upon the minutes of the Association.

Report of Committee on Gorgas Memorial, Spencer Wright, Chairman

(Read by the secretary in Dr. Wright's absence.)

Early last fall, after the assignment to the committee, we wrote Charles L. Richardson, chairman of the National Committee on the Gorgas Memorial in Washington, D. C., for information regarding our task. When no reply was received to this letter some months later, we wrote Olin West, secretary of the American Medical Association at Chicago, telling him we were unable to get any advice on the subject and to please help us out, unless the plan had been abandoned. Dr. West replied to the effect that he would take the matter up and advise us of any action our Association should take. To date we have not received a second letter from Dr. West, so we suppose the matter of the Gorgas Memorial has been dropped, at least so far as State societies are concerned.

Committee on Industrial Medicine, S. D. Colonge, Chairman

The report I am presenting is a classified report of the injuries and cases handled by the committee—Dr. Allen, Dr. Ward, and myself—while we were acting as medical committee with the Industrial Commission. If any of you wish to look this map over to see the number of cases coming under each classification, you are at liberty to do so. There were 228 cases handled on which we were asked to estimate the percentage of disability, either permanent or total. Sixty-one were accompanied by X-ray of present or previous conditions. We also handled and assisted in adjusting 160 disputed bills between insurance companies and physicians. These disputed bills were in nearly every case due to the fact that the requirements of the committee were misunderstood, not because the doctors had padded their bills. Since the time a special committee was appointed there has been no trouble.

Recommendations: That the committees appointed for this work serve four months. They have always served without any pay whatsoever. The Industrial Commission admits it could not carry on its work without our aid, and therefore the doctors should be paid for this work. Some arrangements should be made for a new fee bill. The Industrial Committee called upon the insurance companies to accept the fees that were allotted. One of the most important things this committee was able to help put over was that when a doctor is summoned before the Industrial Commission he is allowed an expert's fee for that service. The Industrial Committee had previously subpoenaed them, but did not pay them. They now refuse to subpoena any doctor unless the insurance companies will pay them an expert's fee. I shall read this classified report to the officers of the Association, and it may be interesting to you to see the different classifications that come under this work.

Examinations Made by Medical Advisory Committee, Composed of Dr. S. D. Colonge, Chairman; Drs. D. K. Allen and W. T. Ward, for the Industrial Commission of Utah.

FRACTURES

Head	3
Shoulder	4
Arm	3
Forearm	11
Spine	21
Chest	14
Pelvic	8
Leg	6
Lower leg	12
Ankle	7
Foot	4
Knee	4
Thigh	1

AMPUTATIONS

Finger	12
Leg	1
Lower leg	1

HEART

Heart 1

OTHER INJURIES

Head 10

Eye 6

Ear 4

Nose 1

Facial 4

Neck 1

Shoulder 2

Back 17

Chest 3

Abdominal 10

Arm 9

Hand 7

Thigh 12

Leg 9

Foot 14

Nerve 4

X-RAY READINGS

61

INFECTIONS

Rheumatic 1

Others 6

NERVOUS CONDITIONS

5

Total 238

X-rays 61

Medical and surgical bills adjusted 106

Examinations made 71

Re-examinations made 16

This does not include opinions on medical bills.

Dr. Black: Is there any provision made by the Commission to take care of the fee recommended by your committee?

Dr. Calonge: Absolutely none. The members of this committee are required to spend half a day a week at this work, and there is hardly a week when we don't have to spend two or three hours in our own offices in work for the Commission. The Commission is in favor of having some provision made for payment of the doctors, but are not in a position to do it themselves; so they want the profession to take some action.

Dr. Landenberger: What do you recommend, and what does the Industrial Commission recommend?

Dr. Calonge: That the Medical Association appoint a committee to work with the Legislature to have proper provision made for the payment of the physicians of this State, and that the committee be kept in this Association and be not allowed to get into politics.

Dr. Black presented the following resolution:

Resolved, that a special committee from the Utah State Medical Association be appointed to confer with the present members of the State Industrial Commission as to means of providing payment for services rendered by the medical committee to the State Industrial Commission; and we recommend the present medical committee as members of this special committee, Dr. Calonge to act as chairman. Motion seconded and unanimously carried.

Committee on Lay Publication and Betterment League, A. A. Kerr, Chairman; W. L. Lindsay, W. G. Schulte, Clarence Snow, R. R. Hampton and W. A. Colton, Members.

The committee met four or five times during the present year. The matter of lay publications and an official publication for the Utah State Medical Association were discussed. The California plan was described and recommended by A. C. Behle, former president of the Utah State Association. The utilization of the Utah Public Health Association and its publication was suggested by J. C. Landenberger. The difficulty encountered by this committee in making definite arrangements for publication in the lay press or through an official organ of the State Association lay in the lack of proper authority and financial support. During the small-pox epidemic in Salt Lake City, the local press co-operated with this committee in giving out in-

formation in regard to vaccination and other methods of prevention. After one year's work and some thought on this subject, the committee has the following to recommend for the furtherance of health education:

1. Co-operation with organizations already in existence, such as State Board of Health, City Boards of Health in various communities, the United States Public Health Service, Dental Societies, Pharmacists, Nurses' Organizations, and all related societies.

2. As methods for health education, we recommend that whenever feasible the lay press be utilized for dissemination of medical data in simplified language.

3. That if funds are available, the State Medical Association publish a monthly health bulletin to be distributed in the various communities of the State.

4. As methods of educating the public in health matters, we endorse the work of the local community clinic under the auspices of the County Medical Society; the work of the traveling clinic as conducted by Major Knight and Warren A. Colton in the interests and prevention of tuberculosis, and the discovery of active cases in the State under the direction of the United States Public Health Service; the work of Dr. Barber in maternity welfare work through funds provided by the Federal Government and under direction of the State Health Department; the conduct of health shows similar to that held in this city, June 6 to 10, 1923, under the leadership of St. Clair Drake. We recommend that, if feasible, this show be repeated from year to year, and that physicians take a more active part in the conduct of such shows. We endorse the work of the American College of Surgeons in standardization of hospitals throughout the United States.

5. We invite the advice and co-operation of all organizations interested in public health publications and education, and in this connection we endorse the A. M. A. publication "Hygeia."

New Business

J. R. Morrell brought up the matter of the Northwest Medical Convention being held at the same time our meeting is held, stating he had received letters from that body asking that we work with them in making the Northwest convention a success and not hold our meetings in conflict with theirs, because if the A. M. A. is districted as has been proposed, Utah would likely be affiliated with the Northwest.

Dr. J. E. Tyree also spoke along this same line, the main discussion being whether Utah would affiliate with the California States or the Northwest States. The discussion resulted in Dr. Morrell moving that a committee be appointed to investigate this matter and make recommendations to the house. Motion seconded and carried unanimously. The chair appointed J. R. Morrell, J. J. Galligan and John S. Sharp as this committee.

The matter of the various cults making use of the Medical Caduceus was brought up by John Z. Brown with the suggestion that this insignia should be protected, if possible. Dr. Raley moved that a committee be appointed to take this matter up with the A. M. A. to see if the caduceus is copyrighted and to find out if this insignia is really being used by those who are not entitled to it. Seconded and carried unanimously. The chair appointed L. J. Paul, J. O. Evans and T. C. Gibson to act as this committee. Dr. Goeltz brought up the matter of delegates and alternates, stating he could find nothing in either the State or county society by-laws that would be a guide on just how these alternates should be seated. He moved that a standing committee be appointed to be called the Credentials Committee, to be composed of three members and the secretary; that this committee should pass on all credentials and bring recommendations to this house as to how the work should be carried on.

Seconded and carried unanimously. The chair appointed F. A. Goeltz, D. K. Allen and T. A. Flood as the Credentials Committee.

Dr. Landenberger announced that an amendment to the constitution and by-laws had been proposed at the last meeting; that it had been published in Northwest Medicine and also in the program, and was to be voted on at this meeting. Adoption of the amendment required a two-thirds vote of the house. The proposed amendment was then duly read as follows:

Article IX, Section 1. The officers of this Association shall be a president, a president-elect, three vice-presidents, a secretary, a treasurer, and three councilors. Vote on this amendment was taken and carried unanimously.

Dr. Kirtley read the following resolution and moved its adoption:

Resolved, that this Association hereby extends to President Thomas and his associates in the University our very grateful thanks for the many courtesies extended to us during our 1923 session. The perfection of the arrangements made for our convenience and comfort, the co-operation of the campus personnel, and the generous use of the University's equipment have made this our most successful meeting, and our appreciation is both enthusiastic and unanimous. Seconded by Dr. John Z. Brown and carried unanimously.

Dr. Kirtley brought up the matter of paying dues of "life" members of the County Society to the State Association, stating that the County Societies would like relief, inasmuch as the State dues had been raised from \$2 to \$8 within the past few years. Dr. Hatch suggested that this matter be handled by the Finance Committee when the re-adjusted budget was planned. The chair informed the house that the Council was the Finance Committee and this matter could be handled by them. He asked that a resolution be drawn up in writing and a report be made at the next meeting of the house.

Report of the Delegate to A. M. A., E. M. Neher, Delegate

At our meeting last fall we reported the proceedings of the American Medical Association convention held at St. Louis. This year's meeting takes place next week at San Francisco.

Since our last meeting we had a letter from the speaker of the House of Delegates, asking us for suggestions and criticisms. The contents of this letter were sent to the president of the State Association, asking for instructions to your delegate. Up to date no formal reply has been received.

However, we wrote a letter to the speaker of the House of Delegates, offering the following suggestions:

1. That 80 per cent of the doctors of Utah had declared in favor of the American Medical Association carrying the liability insurance of its members.

2. The profession in our State recognizes both advantages and disadvantages of dividing the country into sections for the purpose of holding mid-year meetings, but we felt the majority were in favor of holding such meetings.

3. We proposed that the House of Delegates, through its Educational Committee, use its influence in having a short course in medical ethics and medical psychology given by our medical colleges.

Report of the Reference Committee, F. A. Goeltz, Chairman

Your Reference Committee, composed of F. F. Hatch, F. H. Raley and myself, have carefully gone over all the reports made at this meeting, and desire to make the following report:

That we accept the report of the secretary, William L. Rich.

That the report of the treasurer be accepted as read.

We ask that the report of the Council be divided into two sections—the complete report of the Council, and reports by each of the councilors. (At this

point some discussion took place regarding Dr. Rees' report on the Cache Valley Society, and Dr. Rees was asked to re-read his report, which he did.) That we accept the report of the Council and the reports of each councilor, as read by Dr. Rees. Regarding the suggestion by the Council that the fiscal year be changed from April to January, if this change is made it would necessitate a change in the constitution and by-laws, and we therefore suggest that this matter be referred back to the Council for reconsideration.

That the report of the president be accepted.

That the report of the Committee on Public Policy and Legislation be accepted, also the report of the sub-committee on Public Policy and Legislation, with a vote of thanks for the work accomplished by these committees.

That the report of the Committee on Professional Welfare and Ethics be accepted, but that the report be not published with the proceedings of this meeting, and that a copy of this report be forwarded to each of the secretaries of the component county societies.

That we accept the report of the Committee on Education and Post-Graduate Work, H. L. Marshall, chairman.

That we accept the report of the Committee on Arrangements, W. N. Pugh, chairman.

That the work of the Committee on Scientific Work, Ernest Van Cott, chairman, speaks for itself, as all who have attended the scientific meetings know.

That the matter brought up by President Thomas of the University be given immediate attention.

That the report of the Committee on Health and Public Instruction be accepted, also the report of the Committee on Necrology, and the report of the Committee on the Gorgas Memorial.

That we accept the report of Dr. Calonge, chairman of the Committee on Industrial Medicine, also the report of the Committee on Lay Publication on Betterment League, A. A. Kerr, chairman.

Moved by L. J. Paul, duly seconded and unanimously carried, that the report of the Reference Committee be accepted.

Third Session—June 22, 1923

Meeting called to order by the president at 1 p. m.

Minutes of meeting of the 21st read, and, with one exception, approved as read.

The matter of seating delegates was the first order of business. Roll was called and those delegates not present were replaced with duly qualified and elected alternates, the alternates taking the place of the delegates in the order of their appearance on the roll in the program.

President Landenberger announced that the annual election would now take place; that the House of Delegates was to elect a president, three vice-presidents, a president-elect, a secretary (three-year term), a treasurer, and a councilor for the first district (three-year term); that the voting would be by ballot.

President: H. Y. Richards nominated J. R. Morrell.

E. R. Dumke nominated E. M. Conroy.

Moved, seconded and carried that nominations close.

Ballot taken, with the following result: Morrell 19, Conroy 18.

Moved by E. R. Dumke, duly seconded and carried, that the vote for Morrell be made unanimous, which was done; thereupon, the secretary declared J. R. Morrell elected as president for the ensuing year.

President-elect: B. W. Black nominated Sol G. Kahn.

Joseph Hughes nominated D. C. Budge.

F. F. Hatch nominated J. W. Aird. (Dr. Aird declined, as he had been president one term.)

Ballot taken, with the result that Dr. Kahn received 20 votes, Budge 17.

Moved by Dr. Budge that Dr. Kahn's election be made unanimous. Seconded and carried unanimously. Whereupon, the secretary announced that Dr. Kahn was elected president-elect.

First Vice-President: R. R. Hampton nominated L. B. Laker of Eureka.

John Z. Brown moved that nominations close, and that the rules be suspended and Dr. Laker be elected by acclamation, the secretary being instructed to cast the entire vote of the House of Delegates for Dr. Laker. Seconded and unanimously carried; thereupon, the secretary announced that Dr. Laker was elected first vice-president.

Second Vice-President: C. L. Shields nominated T. C. Gibson.

Moved by Raley that nominations close, and that the rules be suspended and the secretary be instructed to cast the vote of the house for Dr. Gibson. Seconded and carried; whereupon, the secretary announced that Dr. Gibson was elected second vice-president to serve for the ensuing year.

Third Vice-President: E. G. Hughes nominated Homer E. Rich of Vernal.

There being no further nominations, the secretary was instructed to cast the vote of the house, and Homer E. Rich was declared elected third vice-president for the ensuing year.

Secretary: W. G. Schulte nominated William E. Rich, and moved that nominations close and the secretary be instructed to cast the vote of the House of Delegates for Dr. Rich. This motion was duly seconded and carried unanimously, and the president announced Dr. Rich unanimously elected as secretary for a three-year term.

Treasurer: F. H. Raley nominated the present treasurer, F. L. Peterson.

There being no further nominations, the secretary was instructed to cast the vote of the entire house for Dr. Peterson; whereupon, he was announced as having been elected.

Councilor for the First District: H. G. Richards of Ogden nominated W. E. Whalen.

E. G. Hughes nominated G. L. Rees.

Ballot taken, with the result that Dr. Whalen received 19 votes and Dr. Rees 17.

Dr. Rees moved that Dr. Whalen's nomination be made unanimous. Motion seconded and carried unanimously; whereupon, the secretary announced that Dr. Whalen was elected as councilor of the First District for the ensuing year.

The president announced the result of the election as follows:

President.....J. R. Morrell, Ogden
President-elect.....Sol G. Kahn, Salt Lake
First vice-president.....L. B. Laker, Eureka
Second vice-president.....T. C. Gibson, Salt Lake
Third vice-president.....Homer E. Rich, Vernal
Councilor, First District.....W. E. Whalen, Ogden
Secretary (three-year term).....Wm. L. Rich, Salt Lake
Treasurer.....F. L. Peterson, Salt Lake

The following letter was read by E. M. Neher:

House of Delegates,
Utah Medical Association.

Gentlemen: We find it is impossible for us to represent your Association at the San Francisco meeting of the American Medical Association, so we respectfully tender our resignation as delegate to said meeting.

Thanking you for the honor, we remain,

Very sincerely,

(Signed) E. M. Neher,

Augustus C. Behle, Alternate.

Moved by H. P. Kirtley, seconded by John Z. Brown, that we accept the resignations of E. M. Neher as delegate to A. M. A., and Augustus C. Behle as alternate, for the coming convention of the A. M. A. at San Francisco. Unanimously carried.

Moved by F. A. Goeltz, seconded by T. A. Flood, that William L. Rich be appointed delegate to the

A. M. A. to represent the Utah State Medical Association at the coming convention of the A. M. A. at San Francisco. Motion unanimously carried.

The following resolution was read by the secretary:

Resolution on the Training of Disabled Soldiers in Chiropractic

Whereas, It is noted that certain veterans of the World War are being trained by the Federal Government with the employment objective as chiropractors; and

Whereas, The schools teaching this particular type of training accept the prospective trainees without having sufficient preliminary training to enable them to intelligently pursue courses of instruction in the healing art, and that the courses of instruction taken to qualify them to practice this branch of the healing art are not based upon scientific principles; and

Whereas, Inadequately trained men who may be licensed to practice the healing art prey upon the ills of humanity; therefore be it

Resolved, That the House of Delegates of the Utah State Medical Association, in annual session assembled, representing more than three hundred (300) of the legally qualified physicians of the State of Utah, adequately trained in the arts and sciences (the only foundation for the recognition, control and prevention of disease), petition the United States Government, particularly those officers charged with the responsibility for the rehabilitation of disabled ex-service men, to take such action in the interests of the welfare of all the people and also for the protection of those who honestly desire to administer to the sick, to the end that the ex-soldiers seeking vocational training which will fit them for ministering to the sick and aiding in the recognition, control and prevention of disease, shall at least meet the requirements and shall receive such adequate training as is defined in the classification of medical schools of the American Medical Association, known as Class A, or acceptable medical schools—a standard which is approved by all right-thinking people moved by a desire for public welfare; and be it further

Resolved, That we petition those officers directly concerned, that there be no more training of ex-service men in any cult at this time or in the future that does not conform to the requirements of Class A colleges as defined by the American Medical Association.

That a copy of these resolutions be sent to the director of the U. S. Veterans' Bureau, Washington, D. C., and a copy to each member of Utah's Congressional delegation, and that a further copy be sent to the Special Senatorial Investigating Committee, now in session, in care of General O'Ryan, legal counsel. Moved by F. W. Taylor that we accept this resolution as presented. Seconded by L. F. Paul, and unanimously carried.

President Landenberger announced the choosing of a place for the meeting of next year as the next business.

D. C. Budge invited the Association to come to Logan. F. H. Raley stated that Dr. George Thomas of the University of Utah had invited the Association to come to the University again. Dr. Worley invited the Association to come to Ogden, the home of the new president. E. G. Hughes moved that we accept the invitation of the Cache Valley Medical Society to meet in Logan next year. Seconded and unanimously carried. Whereupon, the chair announced that the next annual meeting would be held at Logan.

Dr. Hampton, chairman of the committee appointed to talk with Dr. George Thomas of the U. of U. regarding the State Medical School, stated that the time had been too short to do anything and that they would look after this matter later when more time could be given to it.

President Landenberger stated that Dr. Rush had asked that the House of Delegates pass a resolu-

tion regarding the work of the American Society for the Control of Cancer; also that they wished the State Association to help them appoint speakers to aid them in their work.

It was moved, seconded and unanimously carried that Dr. Rush be told that he had the unanimous support of the State Association in his work, and that we would do all possible to aid and help the American Society for the Control of Cancer.

Moved by F. A. Goeltz, seconded and carried, that all matters of credentials be left with the Credentials Committee, to be later passed on by the Council. Seconded and carried.

The question of dues was raised by F. F. Hatch, who moved that the \$8 dues be reduced to \$4. The secretary stated that the dues were raised to \$8 at the last meeting of the House of Delegates by a four-fifths vote of the house, and that they would stay at \$8 unless changed by a majority vote. Dr. Hatch's motion was seconded, and, upon a rising vote, was lost, the dues remaining at \$8.

Dr. H. P. Kirtley stated that, in connection with his report as chairman of the Committee on Professional Welfare and Ethics, he would like to include President Landenberger's address given at the banquet, and moved that the president's address be included with the report of the Committee on Professional Welfare and Ethics, and a copy of it be sent to the component county societies. Seconded and carried unanimously.

Moved by Homer E. Rich that the secretary forward to each member of the State Association the substance of the pledge made at the banquet in connection with President Landenberger's report, these pledges to be signed and returned to the Association. D. C. Budge stated he did not think it would be good policy to put this in writing, and Dr. Rich withdrew his motion.

Moved by Fred W. Taylor that the officers of the past year be given a vote of thanks for their splendid work during the past year; seconded by D. C. Budge and carried unanimously.

Upon motion, duly seconded and carried, meeting adjourned sine die.

MEDICAL WOMEN'S NATIONAL ASSOCIATION

The ninth annual meeting of the Medical Women's National Association was held in San Francisco, June 25 and 26, in conjunction with the American Medical Association meetings, Grace N. Kimball, president; Kate Campbell Mead, president-elect. At the open session, Monday evening, Ray Lyman Wilbur, president-elect of the A. M. A., delivered an eloquent and inspiring address on the power of the minority.

At the open session, Tuesday morning, a five-year program was presented by the executive committee and council, and was adopted. This program is under five heads:

1. Continuation of the work of the Committee on Medical Service, American Women's Hospitals; Esther P. Lovejoy, M. D., chairman, 637 Madison avenue, New York.

2. Federation of Medical Women's Organizations with the Medical Women's National Association, under Organization Committee; Gertrude A. Walker, chairman, Whitefield, N. H.

3. Public Health, co-operating with A. M. A. Council on Health and Public Instruction, Hygiene, and Women's Foundation for Health, etc.; Elizabeth B. Thelberg, M. D., chairman, Vassar College, Poughkeepsie, N. Y.

4. Committee for Medical Opportunities for Women; Sue Radcliff, M. D., chairman, 21 Morris street, Yonkers, N. Y. Internships for young graduate members of the M. W. N. A., in hospitals conducted by the American Women's Hospitals; in Missionary hospitals and in hospitals in U. S. A., as well as opportunities for private practice, service on boards of health, Government appointments, etc.

5. Publicity for the Medical Women's National Association through the Bulletin and an editorial staff, consisting of the president and executive committee, president-elect, and an editor-in-chief. Grace N. Kimball, M. D., Poughkeepsie, N. Y., was appointed editor-in-chief.

The Bulletin, which was published quarterly last year, will be continued as the official organ of the association and sent to all members of the M. W. N. A.

An amendment to the constitution was passed, providing for Group Membership. This was in response to proposals for federation made last year by certain State societies of medical women. Under the Group Membership amendment, organizations of women whose basis of membership conforms to that of the M. W. N. A., viz., membership in the A. M. A., may join the national as group members: Kansas State Medical Women's Society; New York State Medical Women's Society; Connecticut State Medical Women's Society; Portland, Ore., State Medical Women's Club, affiliated through their representatives at the San Francisco meeting.

The Nebraska, Los Angeles and New England Medical Women's societies signified their desire to take action regarding affiliation.

The M. W. N. A. had a most interesting exhibit. Booth E of the A. M. A., scientific and educational exhibits, showing the work of the American Women's Hospitals in Greece and Serbia. Twenty hospitals and a large number of dispensaries are being run by this committee of the M. W. N. A. in Greece alone, under the directorship of Dr. Mabel Elliott, New York Headquarters, 637 Madison avenue, New York; Dr. Esther P. Lovejoy, Executive Secretary.

Four periods on the A. M. A. moving picture theater were assigned to the National—a film of Work in Greece, Crete and the Quarantine Work on Macronessi Islands, shown by Esther Lovejoy; and slides of hospital and surgical work in Serbia, under Etta Gray.

Kate Campbell Mead, of Middleton, Conn., was installed as president. Katherine C. Manion, of Port Huron, Mich., was chosen president-elect.

The following officers and councilors were elected:

First Vice President, Martha Welpton, San Diego; Second Vice President, Marjory J. Potter, San Diego; Third Vice President, Florence W. Duckering, Boston, Mass.; Secretary, Jessie W. Fisher, Middletown, Conn.; Treasurer, L. Rose H. Gantt, Spartanburg, S. C.

The 1924 annual meeting of the Medical Women's National Association will be held in Chicago.

ECHOES FROM SAN FRANCISCO

Referring to it as a three-ring circus but faintly expresses the COMBINED CALIFORNIA CONGLOMERATE.

And yet everything was done decently and in order.

Of course, no swivel-eyed human yet created could see everything.

The Hospital Clinics were of a high order.

Several of the side shows, such as the American Therapeutic Society and the Society for the Study of the Internal Secretions, were by themselves worth a trip to San Francisco.

That Alameda County Barbecue was an event that will cling to the palate of our memory for many a day.

And, Oh Boy, it was too bad that you had to miss those wonderful sessions of the M. W. N. A. Cheer up, the Bulletin will let you in on some of it.

Nevada State Medical Association

By HORACE J. BROWN, M. D., Reno, Secretary Nevada State Medical Association, Associate Editor for Nevada.

J. LA RUE ROBINSON, Reno, President

TWENTIETH ANNUAL MEETING OF THE NEVADA STATE MEDICAL ASSOCIATION, RENO, SEPTEMBER 28, 29, 30, 1923.

Official Call

To the Officers and Members of the Nevada State Medical Association:

The twentieth annual session of the Nevada State Medical Association will be held at Bower's Mansion, Nevada, on Friday, September 28; Saturday, September 29, and Sunday, September 30, 1923.

All active and honorary members are cordially invited to be present, as well as all others who receive this notice.

Headquarters will be Hotel Golden, Reno. Ample transportation facilities will be provided.

If you will attend the meeting, advise the secretary at your earliest convenience.

John LaRue Robinson, President.

Attest:

Horace J. Brown, Secretary-Treasurer.

Program

At the date of going to press the program for the annual meeting is incomplete, but the following is the list of essayists that will help to make up the contributors on September 28 and 29:

President's Address—John LaRue, Reno.

C. P. Knight, Surgeon U. S. P. H. S., Washington, D. C.—"Some Observations on Health Conditions in Nevada."

William A. Shaw, Elko—"A Peculiar Manifestation of Focal Infection, Treatment and Apparent Cure—Three Case Histories."

Maxmillian L. Herzig, Seattle—"Undescended Testicle Complicating Acute Appendicitis—Report of Case."

Thomas Wilbur Bath, Reno—"Septic and Aseptic Wounds, and Wound Closure."

A. W. Morton, San Francisco—"Report of a Case of Acute Osteomyelitis of the Femur."

George F. Farman, Los Angeles—Subject to be announced.

Walter Wessels, Los Angeles—Subject to be announced.

Martin Molony, San Francisco—"Congenital Diverticulum of the Posterior Urethra With Some Remarks on the Modern Method of Treating Chronic Seminal Vesiculitis."

William N. Kingsbury, Reno—"Generalized Osteitis Fibrosa Cystica."

Carl G. Wilson, Palo Alto, Calif.—"A Plea for Improvement in Post-operative Care of Laparotomy."

Claude E. Piersall, Reno—"Present Status of X-ray and Radium Therapy."

Luncheon will be served at Bower's Mansion on Friday and Saturday, and there will probably be a formal banquet in the new banquet room of the Hotel Golden on Saturday night, to which the ladies will be invited. The entire day Sunday will be spent at Pyramid Lake, under the direction of the entertainment committee, where bathing, fishing, and boating may be indulged in. The ladies will be expected to attend this event, of course, and help to dispose of the barbecue dinner and supper.

Membership—There are several new doctors in the State and we feel sure that if some one were to invite them to join that they would be glad to do so. We try to send a few copies of the Bulletin to each new physician that we know of in hopes that he will accept our invitation to make application, but it would be much nicer if one of our members

were to make it a personal invitation. This issue of the Bulletin goes to several new eligibles and we hope they will accept it as an invitation to apply for membership. We will be glad to send an application blank to any one that will drop us a line asking for same. The dues are \$5 per year. If you live in a county where there is a county society, application should be made to it; if not, you can apply direct to the State Association. We would like to hear from several of our old members that must have a guilty conscience.

Dr. and Mrs. M. R. Walker, Reno, have returned from a vacation spent on an Alaskan trip.

Pharmacology and Therapeutics

COUNCIL ON PHARMACY AND CHEMISTRY OF THE A. M. A.

(Reported by W. A. Puckner, Secretary)

The August report of the Council on Pharmacy and Chemistry notices a number of new remedies admitted to New and Non-official Remedies, as well as some interesting data about other remedies:

Sofos.—A mixture of sodium dihydrogen phosphate and sodium hydrogen carbonate (sodium bicarbonate), rendered stable by coating the particles of one of the constituents with disodium hydrogen phosphate. One part of sofos has the same phosphate value as 1.75 parts of sodium phosphate U. S. P. When sofos is treated with water, sodium phosphate (Na_2HPO_4) is formed and carbon dioxide is set free. Sofos has the physiologic action of sodium phosphate. It differs from the effervescent sodium phosphate preparations in that it is free from citrate or tartrate. General Chemical Co., New York.

Pollen Extracts—P. D. & Co.—Liquids obtained by extracting the proteins from the dried pollen of various species of plants. The products are standardized in "units," a unit being the extractive obtained from 0.002 mg. of pollen. For a discussion of the actions and uses of pollen preparations, see Pollen and Epidermal Extract Preparations and Biologically Reactive Food Proteins, New and Non-official Remedies, 1923, p. 234. These preparations are marketed in packages for diagnostic use, and in packages intended both for diagnostic use and for treatment. The following preparations are marketed: Pollen Extract Ragweed (P. D. & Co.) and Pollen Extract Timothy (P. D. & Co.; Parke, Davis & Co., Detroit). (Jour. A. M. A., July 7, 1923, p. 27.)

Sulpharsphenamine-Billon.—A brand of sulpharsphenamine (N. N. R.). (See Jour. A. M. A., March 31, 1923, p. 919.) It is marketed in ampules containing, respectively, 0.1 gm., 0.2 gm., 0.3 gm., 0.4 gm., 0.5 gm., and 0.6 gm. (Powers-Weightman-Rosengarten Co., Philadelphia).

Radium Emanation (Radium Emanation Corporation).—The emanation, mechanically removed from a solution of a radium salt, in admixture with inert gases. It is supplied in sealed glass capillary tubes, each tube accompanied by a statement of the amount of radium emanation in terms of milligram contained in it at the time of sale. The radiation from radium emanation as a therapeutic agent is analogous in all respects to that from radium and its salts, except that the activity decreases rapidly. (See Radium and Radium Salts, New and Non-official Remedies, 1923, 255.) The intensity of radium emanation decreases rapidly through decay (at the rate of about three-fourths per cent per hour). Radium Emanation Corporation, New York. (Jour. A. M. A., July 21, 1923, p. 213.)

Pollen Protein Allergens-Squibb.—In addition to

the products described in New and Non-official Remedies, 1923, p. 241, the following have been accepted: Ash Pollen Allergen-Squibb; Hickory Pollen Allergen-Squibb; Honeysuckle Pollen Allergen-Squibb; Maple Pollen Allergen-Squibb; Oak Pollen Allergen-Squibb; Pine Pollen Allergen-Squibb; Poplar Pollen Allergen-Squibb. E. R. Squibb & Sons, New York.

Animal Epidermal Extracts Allergens-Squibb.

In addition to the products described in New and Non-official Remedies, 1923, p. 241, the following have been accepted: Beaver Fur Allergen-Squibb; Chamois Skin Allergen-Squibb; Civet Cat Fur Allergen-Squibb; Fox Fur Allergen-Squibb; Kolinsky Fur Allergen-Squibb; Leopard Fur Allergen-Squibb; Mink Fur Allergen-Squibb; Muskrat Fur Allergen-Squibb; Mole Fur Allergen-Squibb; Opossum Fur Allergen-Squibb; Persian Cat (Angora) Fur Allergen-Squibb; Pony Fur Allergen-Squibb; Raccoon Fur Allergen-Squibb; Seal (Alaskan) Fur Allergen-Squibb; Seal (Hudson) Fur Allergen-Squibb; Sheep's Wool Allergen-Squibb; Skunk Fur Allergen-Squibb; Squirrel Fur Allergen-Squibb.

Food Allergens-Squibb.—In addition to the products described in New and Non-official Remedies, 1923, p. 242, the following have been accepted: Apricot Allergen-Squibb; Butterfish Allergen-Squibb; Cocoa Allergen-Squibb; Coconut Allergen-Squibb; Cottonseed Allergen-Squibb; Duck Allergen-Squibb; Fig Allergen-Squibb; Flaxseed Allergen-Squibb; Ginger Allergen-Squibb; Goat Allergen-Squibb; Guinea-Hen Allergen-Squibb; Hay (Alfalfa) Allergen-Squibb; Huckleberry Allergen-Squibb; Lemon Allergen-Squibb; Olive (ripe) Allergen-Squibb; Paprika Allergen-Squibb; Pineapple Allergen-Squibb; Pheasant Allergen-Squibb; Pumpkin Allergen-Squibb; Rabbit Allergen-Squibb; Scallop Allergen-Squibb; Sea-bass Allergen-Squibb; Smelt Allergen-Squibb; Sole Allergen-Squibb; Tea Allergen-Squibb; Tobacco Allergen-Squibb; Vanilla Allergen-Squibb; Whiting Allergen-Squibb; Yeast Allergen-Squibb.

Pollen Extracts-Arlco.—In addition to the products described in New and Non-official Remedies, 1923, p. 237, the following have been accepted: Arizona Ash Pollen Extract-Arlco; Arizona Cottonwood Pollen Extract-Arlco; Arizona Walnut Pollen Extract-Arlco; Bermuda Grass Pollen Extract-Arlco; Burr Ragweed Pollen Extract-Arlco; Burroweed Pollen Extract-Arlco; California Mugwort Pollen Extract-Arlco; Carelessweed Pollen Extract-Arlco; Carpet Sage Pollen Extract-Arlco; Greasewood Pollen Extract-Arlco; Hill Sage Pollen Extract-Arlco; Johnson Grass Pollen Extract-Arlco; Mexican Tea Pollen Extract-Arlco; Mountain Cedar Pollen Extract-Arlco; Orach Pollen Extract-Arlco; Pigweed Pollen Extract-Arlco; Prairie Ragweed Pollen Extract-Arlco; Russian Thistle Pollen Extract-Arlco; Sage Brush Pollen Extract-Arlco; Sea Blite Pollen Extract-Arlco; Shad Scale Pollen Extract-Arlco; Western Ragweed Pollen Extract-Arlco; Wild Sunflower Pollen Extract-Arlco.

Pollen Extracts-Arlco are marketed in sets of five vials representing graduated concentrations; also in concentrated solution in capillary tubes for diagnostic test. Arlington Chemical Co., New York. (Jour. A. M. A., July 28, 1923, p. 299.)

PROPAGANDA FOR REFORM

Toxicity of Carbon Tetrachlorid.—Experiments on dogs demonstrated that large doses of carbon tetrachlorid produced degenerative changes in the liver and kidney of these animals. In view of these findings and the experience of Lambert, it would appear advisable that the dose of carbon tetrachlorid be reduced in routine treatments. (Jour. A. M. A., July 7, 1923, p. 47.)

The Dreyer Tuberculosis Vaccine.—Newspapers have carried extended notices of the Dreyer so-called "defatted" tuberculosis vaccine. The experiments of Professor Dreyer of the Department of Pathol-

ogy of Oxford University depend on the production of an antigen preparation from tubercle bacilli which are previously deprived of their waxy envelop by treatment with a formaldehyde solution. Animal experiments and some clinical trials have been reported which give ground for the hope that the new antigen may prove of value. Professor Dreyer's work does not offer sufficient evidence to warrant the conclusion as yet that any marked improvement has been made in the treatment of tuberculosis. (Jour. A. M. A., July 14, 1923, p. 138.)

Another Electronic Diagnosis and Treatment

A report on the case of Mr. D., who was treated for carcinoma by C. E. Phelps, M. D., an Abrams disciple of Hartley, Iowa, is of interest because it represents, undoubtedly, what is duplicated in hundreds, if not thousands, of cases in various parts of the country. The clinical report is by E. E. Munger of Spencer, Iowa, and the pathological report was made by E. R. LeCount of Chicago. Briefly, it is the story of a man in his seventies suffering from inoperable carcinoma of the stomach with implanted metastasis on various other abdominal organs. Munger diagnosed the condition when the patient first came to him. The diagnosis was verified at the Mayo Clinic. Then the man began taking the "Abrams Treatment." He was led to believe that he was being rapidly cured, and was finally told that "everything had cleared up except a trace of colicapsis." A month later he died. (Jour. A. M. A., July 28, 1923, p. 317.)

Ethyl Chlorid as a General Anesthetic.—The published mortality rate from ethyl chlorid anesthesia varies from 1 in 15,000, which is also the mortality rate of ether anesthesia, to about 1 in 6000. From these statistics, therefore, one might judge that ethyl chlorid stands between ether and chloroform; but it is probably closer to the latter, which gives a mortality of about 1 in 3500. Ethyl chlorid, however, is used for minor anesthesia, and it is unfair to compare it with the major anesthetics for prolonged operations. The fair comparison for ethyl chlorid is with nitrous oxid, the accepted mortality rate from which is about one death in 1,000,000 anesthetics. Hence, whether for induction of anesthesia or for minor anesthesia, ethyl chlorid is somewhere between 200 and 66 times more dangerous than nitrous oxid. It is, on the other hand, somewhat safer than chloroform. The essential danger from ethyl chlorid lies in the suddenness of the death, which may occur within half a minute from the beginning of the inhalation. The danger signs are such as may be overlooked by any but the most experienced anesthetist. (Jour. A. M. A., July 28, 1923, p. 320.)

Malpractice Litigation.—On July 20, 1923, J. B. Morris and James Anderson of Petaluma were acquitted of the charge of performing an illegal operation resulting in the death of a patient. Acquittal was the unanimous verdict of the jury, consisting of six men and six women.

On July 21 a jury acquitted Louis L. Jacobs of San Diego of a charge of murder.

These notices are from the many culled from the public press, which go to emphasize the increasing hazards of the practice of medicine. All of these men have been legally vindicated, and no doubt justly so. But what about the expense of long-drawn-out trials, and what about the injuries to reputations that can never be entirely overcome?

What is the answer to this ever-increasing problem? Obviously, every physician, for his own sake and that of those dependent upon him, should protect himself against financial loss by insurance. But what about the injury to professional reputation, which is the most precious and valuable asset to the physician? How can that best be protected?

The editor of the Journal welcomes comment from physicians and others, and will be glad to prepare a more elaborate discussion of the subject from suggestions sent in.

BOOKS RECEIVED

Heart Records, Their Interpretation and Preparation. By S. Calvin Smith, M. D., author of "Heart Affections, Their Recognition and Treatment," Philadelphia. 126 original illustrations. Philadelphia: F. A. Davis Co., publishers, 1923.

Excursions into Surgical Subjects. By John B. Deaver, M. D., emeritus professor of surgery, University of Pennsylvania; surgeon-in-chief, Lankenau Hospital, Philadelphia; and Stanley P. Rieman, M. D., assistant professor of experimental pathology, University of Pathology, University of Pennsylvania; chief of the department of pathology and bacteriology, Lankenau Hospital, Philadelphia. Octavo volume of 188 pages and 30 illustrations. Philadelphia and London: W. B. Saunders Co., 1923. Cloth, \$4.50 net.

Papers from the Mayo Foundation for Medical Education and Research and the Graduate School of Medicine of the University of Minnesota, covering the period of 1920-1922. Octavo volume of 716 pages, with 257 illustrations. Philadelphia and London: W. B. Saunders Co., 1923. Cloth, \$10 net.

The Mortality Experience of Industrial Policyholders, 1916-1920, a contribution to the Public Health Movement in America by the Colonial Life Insurance Co. of America, John Hancock Mutual Life Insurance Co., Life Insurance Co. of Virginia, Metropolitan Life Insurance Co., Prudential Insurance Co., New York, 1923.

Physiotherapy Technic, a Manual of Applied Physics. By C. M. Sampson, M. D., formerly of the Physiotherapy Service; Walter Reed, U. S. Army General Hospital, Washington, D. C.; and of various U. S. Army General Hospitals, U. S. Public Service Hospitals, etc. 85 illustrations. St. Louis: C. V. Mosby Co., 1923.

Infection and Resistance, an exposition of the biological phenomena underlying the occurrence of infection and the recovery of the animal body from infectious disease, with a consideration of the principles underlying specific diagnosis and therapeutic measures. By Hans Zinsser, M. D., professor of bacteriology and immunity, Medical School, Harvard University, formerly professor of bacteriology and immunity, Stanford University, California. Third edition. New York: The MacMillan Co., 1923.

1922 Collected Papers of the Mayo Clinic, Rochester, Minn. Octavo of 1394 pages, 488 illustrations. Philadelphia and London: W. B. Saunders Co., 1923. Cloth, \$13 net.

Practical Dietetics, with reference to diet in health and disease. By Alida Frances Pattee, former instructor in dietetics, Bellevue Training School for Nurses, New York, etc. Fourteenth edition, completely revised. Teacher's Dietetic Guide accompanies the above work. A. F. Pattee, publisher, Mount Vernon, New York, 1923.

Manual of Ship Sanitation and First Aid for Merchant Seamen. Second edition, prepared under the direction of Rev. Archibald R. Mansfield, D. D., superintendent, Seamen's Church Institute of New York, in co-operation with the U. S. Public Health Service, Washington. By Robert W. Hart, past assistant surgeon. Second edition, illustrated. Published by Seamen's Church Institute of New York.

Cures, the Story of the Cures That Fail. By

James J. Walsh, M. D., professor of physiological psychology, Cathedral College of the Sacred Heart, New York; extension professor, Fordham University; lecturer in psychology, Marywood College, Scranton, Pennsylvania. D. Appleton & Co., New York and London, 1923.

BOOK REVIEWS

Principles and Practice of Infant Feeding. By Julius H. Hess, M. D. Third edition, revised and enlarged. 496 pages. Illustrated. Philadelphia: F. A. Davis Co. 1922.

In reading the third edition of Julius Hess' book on the Principles and Practice of Infant Feeding, one is particularly impressed with the up-to-dateness of the book. There have been such great studies in biochemistry and physiology in the last decade that the average practitioner reads any modern book with fear and trembling, knowing perhaps that much will be beyond him, although to the writer, who has kept pace with these ideas, the book might appear very simple.

The author has admirably simplified the best and the most practical in modern theory and has made it applicable in a subject which for the most part has been guesswork to the general practitioner up to the present time. He has made infant feeding real and tangible, with a reason behind it. The questions and problems which are too simple and small to the general practitioner or the young doctor, but which are great milestones in the young mother's life, are answered well and the reasons for them made clear. Apropos of this thought, the subject of maternal nursing is excellently portrayed and many of the time-honored traditions beautifully exploded.

From a scientific standpoint, the chapters on Athrepsia, Anhydremia, Spasmophilia, Rickets, and Acidosis are admirably written. The author dwells on the best in modern thought and applies it simply and in a most practical way to the practice of pediatrics.

Although there are isolated points and statements in the book to which we might take exception, on the whole the book is well written and the statements are correct; but the important point is that baby feeding is made practical, scientific, and easy.

M. M.

Premature and Congenitally Diseased Infants (By Julius H. Hess, M. D. 397 pages. Illustrated with 189 engravings. Philadelphia and New York: Lea and Febiger. 1922. Price \$5.50.)

The appearance of this publication is very timely as it comes at a period in which the profession at large is making every effort to reduce infant mortality and to raise the general standard of the new born. It is hard to point out which of the chapters is of special interest because all the book is good, concise, well organized, splendidly illustrated and offered in a readable English. It is by no means only a book for the specialist and is recommended as a reference book to every physician who comes in contact with obstetrics and pediatrics.

The chapter on "Wet Nursing" is very interesting and can be considered a standard. I also point out the chapter on incubators and methods of improving incubators. It offers many new suggestions that will be of great help to all physicians, especially those who often have to rely upon makeshift methods of treatment.

The book is well indexed so that it can be used for quick reference. Methods and many afflictions are illustrated in such a way that an excellent clinical visual picture is created.

The book deserves the best of recommendations.
L. A. E.

THE PROBLEM OF PERSONAL MEDICAL ADVERTISEMENT

It seems to be difficult or impossible for some persons to distinguish the difference between imparting useful information concerning health matters to the public, and advertising their own particular abilities. In the practice of medicine, which from its very essence must forever be impregnated with humanitarianism, self-exploitation can find no justification if one has due regard for the imperfections of medical science and for the ability of others. There is no man, no group of men, so possessed of medical knowledge that they should be blinded to a realization of their own insufficiency.

Advertising seems to be one of the most popular occupations of a constantly increasing percentage of the medical profession today. It may be of interest to physicians to be brought face to face with an iniquity which, unchecked, is certain to bring disgrace to the profession. "To advertise" is practically defined in the dictionary "to consist in publishing in a newspaper or in some similar way statements generally designed to promote the financial or other interests of the person concerned." It is perfectly evident from this definition that the motive which underlies advertising is one of selfish acquisitiveness, and that it is not based on the desire to impart information.

The extent to which individual members as well as groups of members of the profession under various high-sounding titles are soliciting patients by methods of advertising which are flagrant violations of the principles of ethics as well as of ordinary decency is growing at an alarming speed. Scarcely a day passes that some new form of advertising is not brought to the attention of the Judicial Council of the American Medical Association, and during the last six months an extraordinary number of matters of this kind have been presented to the council. Some of these advertisements are camouflaged under the guise of bulletins or announcements, the bulletin of the ——— group or the ——— clinic; others are just plain out and out advertisements in the newspapers. Some of the bulletins which are issued periodically are distributed quite freely throughout the territory supposed to be tributary to the particular group. They often contain two or three pages of short clippings from medical journals to give them the appearance of having been sent out for the purpose of distributing useful knowledge; then follows the little ad., such as:

Dr. So and So, of our group, has just returned from a visit to such a center, or clinic, and has brought with him some wonderful knowledge, or method, or device, which will enable this group to do something which no one else in that vicinity is prepared to do.

Or there may be reported in brief a case, somewhat as follows:

Case 41144.—Mrs. Blank suffered many years; consulted several physicians in the neighborhood without relief; referred to our "academy" or "clinic." An examination by our group of experts resulted in a correct diagnosis being made for the first time, and the patient was cured, etc.

In detailing these examinations, many tests are frequently mentioned for the purpose of impressing the readers with the great knowledge and thoroughness of the group examinations, it being immaterial whether all of the tests mentioned were necessary to the making of a correct diagnosis or not.

Another method of advertising is to publish in the newspaper an extensive write-up of the group or clinic, containing an elaborate description of the offices, of the wonderful paraphernalia and equipment, and last, but by no means least, a complete and unexpurgated pedigree of each and all of the

members of the group, with their pictures. The character of these write-ups is such as to make it perfectly evident that they must have been written by the physicians themselves.

I should like to present a few excerpts from some of these advertisements which have been received recently.

Dr. A has had the most extensive and thorough medical training of any doctor in ———.

Dr. B is the premier surgeon of this community. ———'s position as a surgical center of this territory is due largely to his successful practice of surgery.

More than 1000 residents of ——— were assisted into the world by Dr. C. In the course of so extensive obstetrical practice it necessarily follows that he has encountered almost every kind of difficult labor, and his results have demonstrated his ability to cope with these emergencies as they arise.

Training that comes of the examination of more than 10,000 patients is brought to the ——— clinic by Dr. D, the clinic roentgenologist.

Dr. E has had the most extensive and varied medical practice of any doctor in ———.

Dr. F is the Nestor of the medical profession of the city of ———. The extent of his practice is indicated by the fact that his prescription number on ——— date of the current year was 126,959. In the course of his many years of practice there is hardly a disease or ailment flesh is heir to that the doctor has not been called upon to treat.

I am sorry that time does not permit me to quote more of these interesting and instructive excerpts. These are all taken from newspaper ads of the pedigrees of these group doctors, each one being accompanied by a picture of the doctor. I am sure you will agree with me that none of these doctors is liable to fall dead of modesty. I will quote a few more excerpts from a newspaper advertisement of a recent group in another city:

"The general practitioner must depend upon his reputation for skill and his personality to draw patronage to his office." This particular group is to do away with this old fogey idea, as it is evidently going to depend on advertising to get its patients. It is certainly amazing and something novel in the history of medicine for medical men to deplore the fact that the physician should be obliged to secure his patients by reason of his professional skill and pleasing personality.

Has it come to pass in the practice of medicine that knowledge and skill and ability and personality are to be rated below printers' ink and audacity in advertising? Are we to return to the days of the blatant quack extolling his own wonderful virtues in printed prose and hawking them from the street corners? Have we arrived at a time when physician's ability and skill are to be gauged by the number of his last prescription?

Another quotation—and this is a sub headline in a newspaper—"Eliminates competition." "It has been said that the profession of medicine is highly competitive, especially in the smaller cities, each physician being a competitor of every other physician." This clinic states it is going to do away with competition because every doctor in the group is to share in the profits of the business. Do the physicians of this group think for a minute that group practice is going to do away with competition? Does the group imagine that it is going to secure all of the medical business of that community? How absurd. We already have the disgraceful spectacle of two groups in the same town, each advertising its superiority over the other. How long can physicians making use of such tactics hope to retain the respect and confidence of the people?

Just a few more excerpts: "The physicians of the clinic are 'physicians first,' devoting their entire time to caring for patients, while an entirely separate department looks after all matters of a business nature, such as the settling of accounts. . .

The troublesome relationship concerning payment of fees and bills is largely eliminated, as the physician is concerned only with the patient's sickness. The business manager must look after all else." What has become of the humanitarian spirit in the practice of medicine, the cherished inheritance of the ages, when physicians announce in the daily press that hereafter they will be so occupied in caring for the physical welfare of their patients that they have turned over to a business agent all business matters, such as all charges, fees and bills, and then incidentally mention in the same announcement that patients will please see the business manager before making an appointment with the doctor? This is prostituting an altruistic profession to plain, outright commercialism. What a mockery are the principles of ethics when physicians pledged to support and follow them deliberately and openly trample them in the dirt. If the medical profession is to save itself from everlasting disgrace, something will have to be done to prevent its degenerating into vulgar commercialism by way of newspaper advertising and similar methods.—M. L. Harris, M. D., in Journal A. M. A.

MEDICAL ECONOMICS

Why not let our advertisers help you?

St. Luke's Thyroid Commission—St. Luke's Hospital announces the formation of a thyroid commission, composed of an internist, a metabolist, a surgeon, and a roentgenologist. The commission is thoroughly equipped for the intensive study of patients suffering with thyroid dyscrasias. After correlation of its clinical and laboratory findings, the commission's function will be to suggest in detail an individual course of therapy to be followed out under the direction of the referring physician or to personally undertake, with frequent metabolic controls, such a course on behalf of the referring physician. While clearly recognizing the surgical indications in thyroid conditions, it will be the policy of the commission to regard surgical intervention as, in general, to be resorted to only after medical and radio-therapeutic measures have, in toxic cases, failed to control the toxemia. Correspondence from physicians is solicited. Communications should be addressed to the secretary of the Thyroid Commission, St. Luke's Hospital, San Francisco.

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NEW MEMBERS

Los Angeles—Annis, A. J.; Berman, Phoebus; Garland, James A.; Kersten, Hugo M.; Allen, Joseph R.; Furusawa, Takashi; Goodwin, Joshua; Huston, James M.; Rhodes, Frederick A.; Smith, Frank E.
Long Beach—Walker, Wade H.; Boyd, Truman O.

Hermosa Beach—Schmid, C. F.

Ahwahnee—Seward, Lee S.

Burlingame—Hanner, John W.; Callaway, William Otis.

San Jose—Porter, Edwin E.; Draper, David.

TRANSFERRED

Blood, John N., Tulare County to San Mateo County.

Clattenburg, H. A., Sacramento County to San Mateo County.

DEATHS

Brooks, Stephen D. Died at Los Angeles, July 4, 1923, age 69. Graduate of the Medical School of Harvard University, 1882. Licensed in California in 1918. He was formerly a member of the Los Angeles County Medical Society, the California Medical Association, and the American Medical Association.

Duncan, Arthur McDowell. Died at Glendale, July 10, 1923, age 73. Graduate of Bellevue Hospital Medical College, New York, 1878, and spent some time in post-graduate work in Chicago, New York, and the hospitals of London and Edinburgh. He was licensed in California in 1904 and practiced in Los Angeles and Glendale to the time of his death. Duncan was a member of the Los Angeles County Medical Society, the California Medical Association, and the American Medical Association.

Peck, John William. Died at Berkeley in July, age 51. He was a graduate of the University of California Medical School, 1905. Peck was a member of the Alameda County Medical Society, the California Medical Association, and the American Medical Association.

Sherry, Henry. Died at Pasadena, July 14, 1923, age 69. Graduate of the Chicago Homeopathic Medical College in 1880. Licensed in California in 1895. He was a member of the Los Angeles County Medical Society, the California Medical Association, and the American Medical Association.

California State Journal of Medicine

OWNED AND PUBLISHED MONTHLY BY THE CALIFORNIA MEDICAL ASSOCIATION

BALBOA BUILDING, SECOND AND MARKET STREETS, SAN FRANCISCO

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VOL. XXI

OCTOBER, 1923

No. 10

ORIGINAL ARTICLES

RESPONSIBILITY FOR STATEMENTS AND CONCLUSIONS IN ORIGINAL ARTICLES

The author of an article appearing in the JOURNAL is entirely responsible for all statements and conclusions. These may or may not be in harmony with the views of the editorial staff. Furthermore, authors are largely responsible for the language and method of presenting their subjects. All manuscripts will be carefully read, but editorial privileges will be exercised only to a very limited extent. It is believed that the manner of presentation of any subject by any author determines to no small degree the value of his conclusions. Therefore, both the author and the reader, in our opinion, are entitled to have the subject as presented by the author as little disturbed as possible by the editors. However, the right to reduce or reject any article is always reserved.

OTITIS MEDIA IN INFANTS AND CHILDREN*

By CLIFFORD D. SWEET, M. D., Oakland, Cal.

The purposes of this paper are:

1. To emphasize the necessity of the inspection of the membrana tympani as an important part of the physical examination in all infants and children.
2. To point out that, if the relief afforded by early diagnosis is to be given the patient, this examination must be made by the family physician, for the reason that only those cases with sufficiently marked and definite symptoms to enable the parent to make the diagnosis fall directly into the hands of the aurist.
3. To call attention to the fact that the necessary skill required to make this inspection can be acquired with a moderate expense of time and diligence by any intelligent physician.
4. To illustrate by brief summaries of cases which have been under my care, the variety of symptoms which may be present in cases of otitis.
5. To re-emphasize the necessity of early paracentesis of the tympanum, in order to prevent serious and prolonged inflammatory processes with their attending dangers.

If scientific medicine is to progress as it should, our every effort must be made to raise the gen-

eral level of diagnostic ability and accomplishment among all of us who stand in the public eye as its disciples. As the very foundation of all diagnostic procedures, a complete physical examination will always be essential. No refinement of laboratory methods and no limitation of practice to a specialty can remove the necessity of first securing this fundamental information, which comes to us only by the use of our own senses. Only after we possess and have recorded these findings can laboratory findings or the report of a specialist be properly evaluated. Furthermore, if the best interests of the patient are to be served and unnecessary loss of his time, money, and not the least—his confidence in scientific medicine—are to be avoided, the complete physical examination is the only basis upon which laboratory tests can be ordered or consultation requested. Lastly, it must form the basis of all surgical interference except it be of the most obvious and minor nature.

The above considerations apply with especial point to otitis media in infants and children. The infant or the child may have an otitis of any grade without localizing symptoms or with typical symptoms coming so late that serious damage has resulted before treatment is begun.

Since diagnosis can depend only in part on symptoms, the physician must school himself to see the tympanic membrane. As in the entire field of medicine, he who would recognize the abnormal must first have a clear mind picture of the normal. With reasonable diligence, a proper light, and instruction which can be had during a few hours in any ear clinic, this picture can be firmly and clearly fixed in the mind. Within a short time, departure from this normal will be recognized with sufficient clearness. If in doubt, an aurist can be called and, after a few such consultations during which the tympanum is inspected under expert guidance, the ability to recognize these departures from the normal is greatly increased.

Otitis media, because of its high rate of incidence and because of its serious import to the patient, should be looked for routinely. Some inflammation, catarrhal or purulent, of the tympanic cavity occurs in the course of many acute upper respiratory infections—probably in 25 to 40 per cent of all that run a febrile course of twenty-four hours or longer in infants. The incidence of this condition as a complication, during the contagious diseases of childhood and in such systemic infections as pneumonia, is too well known to need

*Presented to the Section on Pediatrics at the Fifty-second Annual Session of the California Medical Association, San Francisco, June, 1923.

more than passing notice here. The results in improperly managed cases and in those cases harboring a virulent organism are extremely unfortunate, resulting in loss of life with secondary meningitis, cerebral abscess, or septicaemia, and with loss of, or at least with placing in jeopardy, a greater or lesser percentage of the acoustic function because of mastoiditis with its attendant chronic otitis.

That otitis media cannot be diagnosed except by a careful inspection of the tympanic membrane is evident to anyone who follows a few cases in infants and children. Pain is by no means a constant symptom and, when present, may be referred to the frontal region, the opposite ear, or to the posterior cervical region. Small infants may keep up a more or less constant rolling of the head, probably because of the presence of pain or headache. The belief, however, that pain accompanies all inflammatory processes of the middle ear is widespread not only among laymen, but also among members of the medical profession. Very frequently after making a diagnosis of otitis media, I have had both the mother and the family physician say, with evident doubt in voice and expression, "But doctor, there has been no sign of pain." Likewise, tenderness about the ear or on movement of the auricle may be entirely absent. This, too, especially among physicians, is thought to be a constant sign, and its absence is taken as proof that no otitis exists. In young infants an otitis that produces inflammation of considerable degree may often be detected because manipulation of the auricle is painful. Often the mother's attention is attracted to the ear in this manner. This complaint on the part of young infants is produced because the absence of a bony external auditory meatus permits movement of the area of infiltration about the membrana tympani. This symptom disappears in older children because the cartilage of the meatus becomes separated by a well-defined bony meatus, and the tympanic membrane no longer shares in its movement.

Since these two classical symptoms may or may not be present, it is evident that careful inspection of the tympanum must be made in all cases. That otitis of severe grade may exist without other symptoms than fever is illustrated by the following:

G. F., an unusually intelligent girl of 11 years, was seen in consultation because of a fever of three days' duration for which no satisfactory explanation could be found. About one hour before she was seen the left tympanic membrane had ruptured, and at examination the meatus was filled with purulent material. This progressed to a mastoiditis that required surgical relief. At no time was there complaint of pain or mention of discomfort or tenderness about the ear prior to the rupture.

E. T., age 6 years, was seen in the fourth week of an illness characterized by continuous fever ranging from 101 to 104°. While the child was toxic, there was no complaint, and only late in the disease was there a spontaneous rupture of both tympanic membranes with the discharge of a small amount of purulent material. Even after rupture the amount of discharge was so small that it attracted but little attention and repeated Widal tests were made in an attempt to establish the diagnosis of typhoid fever. During this time she was seen in consultation by a colleague whose training, judgment, and ability are of a very high order, but as no tenderness on pressure, or pain on movement of the auricle could be elicited, otitis was dismissed as a probable cause of

the fever. When seen by the writer no cause for the fever was apparent, except the ear condition. In both auditory canals a small amount of pus was present. On inspection there was such complete prolapse of the superior and posterior walls of the auditory canals that no part of the tympanic membranes were visible. A diagnosis of bilateral mastoiditis was made, and the following morning Dr. F. M. Shook did a double operation revealing a very marked involvement of both mastoid areas with extensive bony necrosis. In this case there must have been considerable mastoid tenderness, but as the child was an unusually diffident one, it was difficult to elicit definite signs.

Even when pain and tenderness are present, they do not indicate accurately the degree of the pathological process. Many times the most painful otitis will subside within a few hours, requiring only expectant treatment. Whether or not the expectant method may be safely followed can be determined only by careful and repeated inspection of the tympanum. Then, too, pain when present, may be irregular in character—for example, it may come on only at night. The child may appear to be normal during several days, and suffer each succeeding night with severe ear-pain.

E. S., a girl of 5, suffered severely for five nights with severe pain in the right ear and, because she appeared normal in the day-time, a physician was not called. When seen on the fifth day, the temperature was 100° F., and physical examination was negative except that the right tympanum was a deep red in color, and sufficient bulging had taken place to obliterate all landmarks. Paracentesis released a large amount of serosanguineous fluid. That night the child slept comfortably, and for a few days seemed to be progressing well, when the temperature suddenly shot up, the discharge from the ear became more profuse and decidedly more purulent in character. The ear condition progressed rapidly into a mastoiditis that demanded operation. Very probably had a paracentesis been done early, the result would have been a very simple otitis which would have cleared within a few days.

Fever, while usually present, is not a constant symptom. Where present, with the other direct symptoms as pain, tenderness on pressure or manipulation of the auricle, pointing to or constant handling of the affected ear, complaint by voice or head rolling, the diagnosis is apparent. However, the writer has many times seen infants with a normal temperature whose only symptom was vomiting or restlessness at night, but whose tympanic membranes were one or both bulging markedly and greatly discolored. Upon paracentesis, a free discharge of pus was released from the middle ear, with relief of all symptoms. Often this purulent discharge is maintained for days or even weeks, establishing beyond any possible doubt the true nature of the complaint.

No attack of diarrhoea in an infant or child, whether febrile or afebrile, can be considered completely without giving otitis its proper place either as the causative factor or as a complicating factor which delays or prevents recovery.

A. T., age 16 months, when first seen had been suffering with diarrhoea for two weeks, apparently convalescent for a day or two and then relapsing. All of the usual remedies, castor oil, starvation, colon flushes, carbohydrates, and protein milk, had been tried without avail. Malaria had been considered and ruled out by negative blood findings. Finally, the mother had been told to take him out

of the hot climate of an interior valley. Change of climate had likewise been of little or no aid. On examination and paracentesis a purulent otitis media was demonstrated, the relief of which caused the diarrhoea to disappear at once.

Vomiting is likewise a fairly common presenting symptom of febrile or afebrile otitis, especially in young or marantic infants. Many text-books state that otitis is rare during the first few weeks of life, but we have repeatedly seen it in infants under one month of age. Even in these very young infants its incidence is great enough to make inspection of the ears an important part of the physical examination. In examining young infants, it is well to remember that the tympanic membrane lies almost vertically across the canal, and that it can be seen by slight downward and forward traction on the tragus rather than by backward traction, which is practiced on the older child. I have had one case of mastoiditis with subperiosteal abscess in an infant of five months, whose otitis media began on the tenth day after birth, with a purulent discharge which was continuous until operation.

J. C., a boy baby 13 days old, was first seen because of projectile vomiting which indicated pylorospasm and which was sufficiently marked to make us seriously consider pyloric stenosis. On examination both tympani were cherry red and markedly bulging. Paracentesis released a free purulent discharge from both tympanic cavities with subsidence and, after a few days complete clearing up of the symptoms of pylorospasm.

Intestinal indigestion or colic also has as its cause an afebrile catarrhal or purulent otitis. This condition should especially be given consideration if the symptoms are present only or in most marked form at night, and a history of an acute coryza within the preceding ten days makes one consider it as the most probable cause. Frequently we see infants who have been subjected to most unreasonable food changes and deprivations—even weaning from an adequate breast milk supply—when examination and treatment of an otitis was the only indicated treatment. In this connection it is well to remember, as G. F. Still points out, that a catarrhal otitis may exist in a sufficiently active form to produce systemic symptoms for a long period of time—even weeks or months.

J. R., age 7 months, was seen because of persistent "night colic," which had caused restlessness, crying, and much flatulence for a period of five or six nights. Several food changes including both increasing and decreasing the food had been without avail. About seven days before the beginning of symptoms, there had been an acute coryza. Examination revealed a reddened left tympanic membrane, but no bulging—the temperature being normal. Instillation of 10 per cent carbolic acid in glycerine every two hours during the waking hours, and the insertion of a cotton plug in the external auditory meatus at bedtime gave instant and complete relief.

SUMMARY AND CONCLUSIONS

1. Every effort should be made to improve the level of diagnostic ability of the members of our profession. This can be forwarded by the members making careful routine physical examinations.

2. Otitis media in infants and children is so frequently present without localizing symptoms that inspection of the tympanum is a necessary routine part of every physical examination. This in-

spection presents no technical difficulty that cannot be overcome by the general practitioner.

Much more could be written on this interesting and important subject. It is hoped this may stimulate the general practitioner and the specialists who handle children to give it close and careful study.

(440 Seventeenth Street, Oakland, Cal.)

DISCUSSION

Langley Porter, 240 Stockton street, San Francisco—The importance of the subject which Sweet presents is hardly to be overestimated. Anyone who deals much with sick children soon comes to feel that neglect to examine the ears is a negligence for which the infant pays dearly. Sometimes the payment is made in unnecessary pain or unduly prolonged fever, which disappears after spontaneous rupture of the tympanum. At other times the toll is taken in terms of insidious diseases, mastoiditis, zygomaticitis, subdural abscess, sinus thrombosis, meningitis, brain abscess, or general sepsis.

In the modern type of electric otoscope which carries its power in dry cells concealed in the handle, we have an instrument that is convenient and capable of perfectly illuminating the ear-drum, and presenting the observer with a magnified image of that structure. If the physician will make observation of the ear-drums part of his routine examination, he will soon be so familiar with these structures that slight variations from health will arrest his attention at once. Such procedure on the part of all those who deal with babies would soon remove otitis media from the group of pathological entities commonly overlooked in infant patients, a group which includes otitis and its complications—cystitis, scurvy, intussusception, and empyema.

Sweet has properly laid stress on the fact that in many instances otitis comes on and consummates without pain or tenderness that can be referred to the ear, indeed, sometimes with no pain at all, so that when we are confronted by a feverish infant or child, one of our first duties is to exclude a possible otitis even when the patient suffers no pain.

One point that the speaker has not stressed is that very extensive otitis may occur without reddening of the drum or of the auditory canal.

During the epidemics of influenza some years ago, the otologists of the Children's Hospital made routine otoscopic examination of the ears—morning and night—and on many occasions after finding the drum apparently normal at one examination were confronted with a rupture and a discharging otitis at the next. In all the cases which behaved in this way, pneumococci were grown from the discharge in pure culture. Such cases are less important than those of the smaller group in which otitis occurs without pain and without rupture going on to dangerous complications.

Every children's hospital can show records of such cases. For instance: An infant suffering from underweight, with diarrhoea, after the diarrhoea was cured continued to have a high leucocytosis and a septic temperature, which on several occasions reached 106° to 108°. This state of affairs lasted for some six weeks, and during this time the child's ears were repeatedly examined by various members of the medical staff, as well as by otologists, and not the slightest evidence of inflammation of the drums or of the canal, nor any edema, pain or tenderness could be found; yet, on autopsy, this child had extensive involvement of both middle ears, both mastoids, as well as a subdural abscess on one side.

The record rooms of almost any hospital can furnish duplicates of this case, and it would be possible to quote one and many others from personal experience that could as well, or better, illustrate the point that extensive damage and life-endangering complications can develop in the middle ear and mastoid without any or only the slightest degree of pain, tenderness, swelling, or reddening of the audi-

tory canal or of the tympanum. Such possibilities not only emphasize the need for observation of the points Sweet has brought out, but they make it incumbent on all of us to give weight to the ear as a source of insidious disease and to such study of the not infrequent mystifying attacks of fever with leucocytosis which can develop from this organ. Following such a course, we will be able by exclusion to arrive at diagnosis of the ear-drums in the absence of positive aural findings.

Clifford D. Sweet (closing)—I want to thank Dr. Porter for calling our attention to the cases that develop an otitis media of severe grade without physical signs that can be discovered by otoscopic examination. I have seen such cases, but after consideration did not include them in this paper for fear of making the diagnosis appear to be more difficult than it is. At another time I hope to present an additional discussion of otitis media.

LOCAL ANESTHESIA IN MAJOR SURGERY: ITS USES AND LIMITATIONS *

By L. ELOESSER, M. D., San Francisco

From the Division of Surgery, Medical Department Stanford University.

The request of your secretary, Dr. Rethwilm, to discuss local or regional anesthesia in major surgery has given me a welcome opportunity. The time is ripe, I think, to discuss not so much the various applications of local anesthesia as to attempt a delineation of its indications and limitations. Local anesthesia no longer needs a plea. It has come to stay. Twelve years ago a paper of mine, sketching some of the uses to which it might be put, was printed in the California State Journal of Medicine. Such a paper would be superfluous today. There is scarcely a hospital in which local anesthesia is not in daily practice. We need nowadays rather to scan the possibilities and impracticabilities of this lusty and sometimes outrageous youth; to curtail his vagaries and bizarre excursions, and to properly confine his activities. As is usual with these striplings, charmed with the exhibitions of their first prowess, he has run too far.

One has but to read reports of strange methods of splanchnic injection, of paravertebral injection, of arterial injection, to realize that the technical fascination of this kind of narcosis has led adepts in the art to the elaboration of complicated tricks and show-pieces that lose all sight of the end they wish to attain; viz., the most innocent and easiest abolition of surgical pain. These tricks and show-pieces have not been without a certain usefulness. At certain rare times they may be of practical value; aside from this, they show what can be done.

The object of any narcosis, whether regional or general, is to prevent pain. The easiest and most innocent way—easiest and most innocent, not for the surgeon, but for the patient—should be the way of choice. This formula for indications and contraindications for methods of narcosis is so simple that it seems a platitude, and to dwell on it, as Henry James says, "the laborious demonstration of the self-evident." But it is not simple. There are too many factors that govern what is easy and innocent, and too many varying ones—factors vary-

ing with particular patients, particular surgeons, particular times and places of operating, with assistance and equipment and circumstances.

These factors, both the varying and the fixed ones, I shall try to discuss.

First, the fixed ones. There are certain disorders and diseases in which even the temporary loss of all safeguarding reflexes is harmful; natural reflexes—pain and muscle spasm to splint injured parts; cough. There are certain disorders where loss of consciousness is harmful in that it allows the patient to do things he should not do—to struggle and toss about, to strain, to cough, to make deep or uncontrolled respirations, to vomit. There are certain operations—on nerves and tendons—which may be made more difficult by the inability of a patient to co-operate.

When, therefore, loss of consciousness is in itself harmful, because it abolishes the reflexes, or deprives the patient of self-control or the ability to co-operate, regional anesthesia is the method of choice and is preferable to general narcosis. To illustrate: The loss of safeguarding reflexes is harmful in many disorders of the mouth or of the lung. It is true that modern devices for insufflation anesthesia have lessened the dangers of aspiration from the mouth, but none of these is as effective as a cough in clearing the lung of material that may enter it.

As harmful as the things that a patient does *not* do when his reflexes are gone are the things he does when he loses consciousness. No one, for instance, would prescribe for a tubercular patient deep-breathing exercises and violent muscular exertion. Yet that is what he often does when he goes under an anesthetic—breathes deeply, struggles, and tosses about. It is not nitrous oxid gas, in this instance, that damages the pulmonary parenchyma; it is the deep respiration and the muscular exertion that bring on a post-anesthetic exacerbation of tuberculosis.

A man suffering from a fractured skull, with intracranial hemorrhage, we treat in a way calculated to reduce the intracranial pressure. We keep him quiet, we give him epsom salts. But we put him to sleep with ether (1 c.). Unconscious, he is trundled about from a gurney to the operating-table; he struggles, he vomits—during, perhaps, or after his anesthetic—he does everything he should not do to keep the pressure in his intracranial vessels down. It is not the ether that hurts this man; it is the effect of uncontrolled and uncontrollable incidents of the loss of consciousness.

In operations, therefore, where loss of consciousness is in itself harmful, local anesthesia is the method of choice. Into this category will fall, mainly, certain operations on the brain and operations involving the respiratory tract. But not abdominal operations. A temporary loss of consciousness is not harmful to patients undergoing a laparotomy. We have not our viscera under voluntary control. They work the same whether we are asleep or awake. Consciousness is not a help; it is a hinderance, when the belly is opened.

These, then, are fixed factors in governing our choice of anesthetic. In such and such a disorder

* Presented to the Section on Anesthesiology at the Fifty-second Annual Session of the California Medical Association, San Francisco, June, 1923.

the risks arising from a loss of consciousness are such and such, they may be gauged beforehand, and weighed against the possible degree of danger, pain, and discomfort of a regional anesthesia. The choice of anesthetic is determinable by balancing risks and discomfort one against the other.

Another fixed factor lies in the magnitude of the operation. There are few patients who would care to take a general anesthetic for the removal of a wen or a wart. If the operation is slight, and the local anesthetic easy, local anesthesia will outweigh the discomfort of a general anesthetic. But if the field to be anesthetized is large, so that it calls for large amounts of solution, the danger of novocain poisoning (reported more and more frequently of late) may outweigh that of a general anesthetic.

Varying factors determining the choice of anesthesia will depend upon the patient, the surgeon, outer circumstances, and matters of expediency.

Unless quite necessary, local anesthesia should not be forced upon a frightened or an unwilling patient. The first needle-prick will usually tell of the success of regional anesthesia. A patient who cries out and complains when the needle pierces his skin will have a poor anesthetic. The psychic shock to a frightened patient of an operation under local anesthesia cannot be ignored; it may more than outweigh the damage done by a general anesthetic. Operations upon such patients are likely to be so prolonged and hampered that they turn out unsatisfactorily in the end—both patient and surgeon are likely to wish that the operation had been done under a quiet general narcosis.

Preliminary injections of morphin-atropin $\frac{1}{4}$ -1 150 grains for adults are almost indispensable. They occasionally so quiet the psyche that even frightened patients will submit calmly to operation. Supplementary doses of morphin $\frac{1}{8}$ - $\frac{1}{6}$ grains may be added to alleviate the momentary pain of maneuvers such as stripping the pleura, which cannot be controlled by novocainization.

I no longer use scopolamin. Its effects are uncontrollable; its balance wavers between depression and excitation, not only in different individuals, but sometimes in the same person. The apathy and somnolence of a scopolamin narcosis are alarming at times. On the other hand, often a somnolent patient will be awakened by a sudden twinge of pain, by a noise or a fright, and then suddenly pass into a stage of excitation in which he is quite uncontrollable, and which makes the induction of general anesthesia very difficult. It seems as though patients once aroused from a scopolamin lethargy quite regularly fly into this fit of excitation. Once, however, general narcosis has been induced, the depressing effect of the scopolamin again makes itself felt and the patient is likely to show an alarming slowness of respiration and cyanosis.

Varying factors governing the choice of anesthesia will lie in matters of expediency, circumstance, and equipment. Great stress of work, in military hospitals for instance, may leave no time for local anesthesia.

On the other hand, local anesthesia is invaluable when assistance is scanty or poorly trained. With local anesthesia we save not only one more or less

highly trained member of the personnel—the anesthetist—but also the orderlies and nursing staff necessary to watch over an unconscious patient. Local anesthesia is of the greatest value in small hospitals and in institutions where the surgeon is forced to work almost, if not quite single-handed. Often he will stretch a point to work under regional anesthesia which he himself can induce and control, rather than leave his patient to the mercies of gas or ether at the hands of an unknown anesthetist of dubious skill.

Often gas may be the anesthetic of choice, but lacking equipment or a skilled anesthetist to give it, one will turn to novocainization rather than expose a tubercular or a pneumonic patient to the dangers of ether.

These factors, then, fixed or varying, will guide our choice of an anesthetic.

I might particularize somewhat more detailedly certain regions and their adaptability to local anesthesia.

The head and neck lend themselves particularly well to nerve-blocking. The nerves lie well anatomically; injections of small amounts of novocain at certain fixed points will anesthetize large areas.

Trephining is easily and painlessly done under local anesthesia. It is harmful to put an unconscious patient with concussion of the brain and with signs of brain pressure under a general anesthetic if it can be avoided. His struggles under gas or ether, anesthetic and post-anesthetic vomiting will increase intracranial pressure and may provoke further intracranial hemorrhage. The adrenalin content of the anesthetic solution helps greatly to reduce bleeding from the scalp. In operations on the face, and especially the mouth and its contents, local anesthesia is invaluable. Post-operative aspiration pneumonia is not entirely done away with—it is induced mainly by the post-operative difficulties in swallowing and expectorating—but its frequency and severity are greatly lessened.

Operations on the neck, even very extensive gland dissection for cancer, may be done safely and easily under local anesthesia. The original form of Schleich's anesthesia with infiltration of the deep parts step by step seems as good as any. The newer methods of paravertebral injection are for the most part unnecessary; they are more likely to cause serious collapse and novocain poisoning than almost any form of local anesthesia. It has been said that patients with Graves' disease are particularly susceptible to novocain; perhaps this susceptibility is due to the adrenalin content of the novocain-adrenalin solution.

Nerve block is the anesthetic of choice for laryngectomy and laryngofissure. The anesthetist and his apparatus are out of the way, preliminary tracheotomy is unnecessary, aspiration much easier to avoid and to control.

Almost all operations upon the bony thorax should be done under local and regional anesthesia. In most of them we have reason to suspect trouble in the underlying lung. A general anesthetic is bad for an inflamed lung. I should like to dwell again upon this fact. Ether chemically damages the lung parenchyma; gas, it is true, does not—but

neither does gas, nor any anesthetic which robs the patient of consciousness prevent aspiration, uncontrolled movements of coughing, suction and expiration under pressure. These uncontrollable respiratory movements are dangerous.

Local anesthesia for single or multiple rib resection, for empyema, or for a more extensive thoracotomy, for lung abscess for instance, is simple and perfect. It makes operation in the sitting position possible, it makes use of the patient's co-operation in emptying his chest and preventing pneumothorax. One may enter the lung easily and painlessly for the drainage of abscesses or areas of gangrene. It is not necessary to anesthetize the lung itself: the lung is insensible to the knife and the cautery.

I am not quite so ready dogmatically to assert that nerve block is the only possible anesthetic for the most extensive collapsing thoracoplasties, such as Schede's operation for chronic empyema, and Sauerbruch's for tuberculosis. Although I have been fortunate enough to have had no fatality among the thirteen patients operated upon under novocain, I must confess that the shock at the end of operation has often alarmed me. I was inclined to lay the blame to the large amount of novocain necessary to anesthetize the whole chest-wall. So that I operated upon my last patient under gas. Her shock was not less than in the others, and lasted perhaps longer. However, there is no doubt that it is both easier and quicker to operate under general anesthesia than with a nerve block alone.

Sauerbruch, too, if one may judge by the statement of his assistant, Brünner, has admitted that he has seen no harm from the careful administration of ether in cases with little or no sputum, although he does his thoracoplasty under novocain as a rule.

More important than the question of anesthesia in extrapleural operations is the problem of anesthesia in operations calling for a wide opening of the chest. I hesitate to broach this subject; my experience has been insufficient, and local anesthesia for these operations seems, as far as I can discover, entirely untried.

Methods, both of positive and negative pressure, are objectionable, especially if the lung is diseased. The flapping back and forth of the lung is alarming, the rapid alternation from insufflation to collapse is terrifying. Even with the most expert anesthetist, one is uneasy. I have had one death on the table during an exploratory thoracotomy. You will concede that even the best of positive pressure anesthetics is exciting and disquieting when the thorax is wide open. Five times I have been put before the problem of opening the chests of gravely ill patients, four with pulmonary tuberculosis, one with lung abscess and massive bronchiectatic pneumonia, in whom artificial pneumothorax had been previously induced. Several times, uncertain of my ability to carry through the operation on the conscious patient, I asked Dr. Botsford to be present so that I might have recourse to her skill if my own efforts failed. I had no occasion to call upon her help. I know of nothing more dramatic than to see these patients breathing quietly

and calmly, their affected lung remaining perfectly collapsed while their chest was wide open with a trap-door through which I introduced my hand and was able to sever and ligate adhesions and to suture the pleura. It was indeed remarkable and interesting. Four of the patients felt a momentary pain when I tore the adherent lung from the parietal pleura with my hand. In the last patient the pain of this rough manoeuvre was lessened if not quite stopped by a subpleural injection made intrathoracically. But one of the patients suffered a temporary access of air hunger. The evolution of this attack was curious to observe. I had opened the chest of a little tubercular girl of 15 with an artificial pneumothorax in order to sever adhesions between the chest-wall and the insufficiently collapsed lung. While the chest was wide open she suddenly began to cough, and becoming frightened moaned aloud. Immediately her lung began to balloon out and to flutter back and forth. The opening in her chest was held closed with a large wet towel; the patient was encouraged and quieted. After she became quiet the wound was opened and the operation proceeded without further ado. Her cough and cries had caused a sudden increase of intrapulmonary pressure, which unbalanced the equilibrium of the pneumothorax. It required but a few moments of quiet breathing to re-establish it.

It seems as though this form of anesthesia may have a future in thoracic surgery, and that for some lung operations a preliminary pneumothorax with local anesthesia following may supplant positive pressure apparatus. I shall report upon the method more extensively later.

Mammary cancer may be removed painlessly under methods of nerve block, but I see no need for them. It seems to me as though this were one of the instances where we had allowed ourselves to be carried away by our enthusiasm. Ether or gas will do patients with uncomplicated cancer of the breast no harm. Freedom of action is the first essential in operation for cancer. Why, then, allow the limitations of regional anesthesia to offer a hindrance? And whether or not the injection of the perineural lymph spaces with novocain solution may not help spread the cancer no one knows. There seems to be no good reason for avoiding general anesthesia in cancer of the breast.

A few simple and typical abdominal operations, those in which the surgeon knows exactly what he is going to do and in which he has no wish to explore the abdomen may be, and sometimes should be, done under local anesthesia. Colostomy, enterostomy, gastrostomy for example, in operations for palpably inoperable carcinoma, or in dangerously ill patients whose bellies need not or should not be explored. But when one does not know exactly what one is about to find, nor exactly what one is going to do, in the great majority of abdominal operations for acute or chronic disease, regional anesthesia sets an unwarranted stop to proper work.

It is a great help to anesthetize the skin and the parietal peritoneum after the manner of Crile, for most of the pain in the course of a laparotomy

comes from the belly wall and not from the viscera. Local anesthesia helps greatly in getting sufficient relaxation under light anesthesia. If we stop the pain with novocain the patient will sleep with gas and morphine almost naturally.

General anesthesia may be further curtailed, especially in dangerously ill patients by infiltrating the abdominal wall and opening the belly under novocain, and then waiting until the patient has been put to sleep before proceeding with intra-abdominal manipulations.

Or anesthesia with gas and novocain may be begun simultaneously. This is especially advantageous in smaller hospitals where delays in draping and scrubbing the patient often prolong the anesthetic quite unnecessarily.

Nerve-blocking alone, paravertebral and splanchnic nerve blocks, are rarely indicated in abdominal operations. Ether and gas do the viscera themselves little or no harm; the delay and limitations of operation under an anesthesia so undependable as the abdominal nerve blocks will more than counterbalance the evils of a general anesthetic. Rarely the lack of facilities for giving gas or unskillful anesthetists may force us to depend upon novocain alone.

Most operations on the bladder, the prostate and the urethra, may be done under local and regional anesthesia. The various forms of sacral injection compete with regional anesthesia; the choice will rest with the skill of the individual operator in one or the other of these methods. The choice between local or sacral anesthesia and gas will often be a matter of personal preference and expediency. Local or sacral anesthesia is perfectly useful and sufficient; the field of bladder and perineal operations is anatomically circumscribed; there is rarely need for unforeseen exploration or extension of the operation beyond the anesthetized areas. Except for simple operations like cystotomy or urethrotomy, operators having a skilled anesthetist and assistants at their disposal will choose gas or ether as a rule. Operators working single-handed, with limited assistance, will incline to injection methods. The patient will do as well by one way as by the other.

Local anesthesia is a hindrance in major operations on the large bones of the extremities. It is invaluable in operations upon the soft parts where the co-operation of the patient is to be desired. It makes tenoplasties and tendon sutures easier and more accurate, it enables the operator to judge of the effects of his procedure there and then, to change the tension of sutures or their position if the first effect is not all that he desires. It is a help in operations on the peripheral nerves.

In the upper extremity I prefer local infiltration to plexus anesthesia, after which I once had happen a permanent ulnar palsy.

SUMMARY

Regional anesthesia is invaluable in operations where loss of consciousness is harmful. It is most useful in operations on the skull and brain, on the thorax and on the soft parts of the extremities.

When used after preliminary pneumothorax it

may replace positive pressure anesthesia in certain thoracic operations.

It is usually unnecessary to use local anesthesia unaided by general in abdominal operations. Used alone it is a hindrance to proper exploration; used with general anesthesia it is an valuable aid.

(135 Stockton Street.)

THE THERAPEUTIC ASPECT OF SHORT WAVE X-RAYS*

By ALBERT SOILAND, M. D., Los Angeles

X-ray therapy in general has been actively before the medical profession for a quarter of a century, and its use and limitations are now fairly well established. This statement, however, is not applicable in a general way to the more recent achievement of short wave therapy by means of extremely high voltage. As the use of this method in the United States is limited to less than two years of clinical work, the time element is as yet not sufficient to draw any definite conclusions. Data on this work, however, is accumulating with increasing volume, and we are now in a position to at least discuss intelligently the problems of deep roentgen therapy.

Let it be clearly understood that this is not a new X-ray. It may be called a refinement process, whereby those rays which energize the skin and superficial structures are eliminated and a wave form of X-ray is produced, which delivers its energy to tissues heretofore inaccessible to earlier methods. In other words, we have now available a large amount, if it may be so termed, of deeply penetrating short wave X-rays.

To produce such rays requires an exciting voltage of two hundred thousand. It is also necessary to use specially constructed vacuum tubes to transform this voltage into direct X-ray energy. Next must be considered the electrical requirements which enter into the successful operation of a plant of such proportions, a problem which taxes the engineering skill of the artisan, for here is no plaything which any individual can handle with impunity. The dangers are grave, both from an electrical standpoint, as well as from the X-ray product, the consequences of which, if not directed with intelligence and care, are terrible to contemplate. The discussion of this part, however, may be well left to the specialist who is concerned with the operation of these rays, and will, therefore, not be further dilated upon here.

The first reports of short wave X-ray results came from abroad, accompanied by such enthusiastic accounts that radiologists in America were led to believe that they might as well discard their old equipment, procure the new, and at once reap the benefits of this highly promising form of treatment. The American radiologist is, as a rule, a fairly level-headed individual, and is unwilling to discard a time-tried method before he has had ample opportunity to try out a new. He hoped that the short wave X-ray would accomplish all that was claimed for it, and is now desirous of submitting his observations to you for your own good judgment.

*Presented to the Southern California Medical Association, April, 1923.

The clinical conditions which seem to offer the best field for deep therapy are primarily those which have yielded poor results to other known methods. Upon malignant conditions in general, the deep X-ray has made its greatest mark, and while in no sense a curative agent in conditions which are ostensibly incurable, some of the results achieved in these have been so startling as to lead us on in the hope that with further experience and more refinement of technique, many actual cures might be obtained. Those of us who have seen the immediate effect upon large inoperable tumors, both malignant and benign, have marveled at the clinical changes, and while most of these have been of more or less temporary benefit only, the occasional one which shows permanent relief buoys us up in the hope that we may eventually increase this number to a higher degree.

To cure a cancer necessitates the destruction of every aberrant cell involved, and to accomplish this is the end toward which we are aiming. The problem, therefore, of making use of deep therapy is to seek out and destroy these cells with the least possible amount of disturbance to the normal structures or to the host in general. Whenever it is possible to execute this mandate, a cure will result. To do this successfully requires not alone a diagnostic acumen, but a well-founded knowledge of the essentials of radiation therapy. It is obviously impossible to effect a cure in any condition where cancer has become generalized. This accounts for the general failure to cure by any means at our present command a metastasized tumor, using this term in its broad sense. A tumor which has grown by extension and not metastasized beyond the lymph glands in the immediate neighborhood may, by the judicious and adequate use of short wave X-rays, be permanently cured, but if one single cell escapes from the field in question, the cure is futile. This, therefore, is the great unknown quantity. There is at present no assurance that we can deduce by any form of reasoning or investigation that a tumor is localized or circumscribed to a given field. When a tumor is curable, it is manifestly curable to any agent which removes or destroys its activity. It may be successfully attacked by surgery, which in this instance will be considered to include removal by knife, by the actual cautery, by thermal coagulation, or by any chemical agent which destroys it in toto. Such a tumor is also curable by radiation. Which of these methods is to be preferred will depend entirely upon the location of the growth and upon the patient's physical condition. A great many may be successfully mastered by the surgery alluded to, and may be with equal certainty conquered by radiation. The selection of the preferable method should in every case be left to the decision of the skilled clinician.

A great deal has been written upon the effects of the deep X-ray. This varies naturally with the amount used and the condition of the patient. Up to the present time, the skin, which was formerly our greatest source of danger with the lower voltages, seems to have suffered very little from the short wave, but new dangers have appeared and various constitutional disturbances result from

large amounts of the latter. These disturbances are nausea, prostration, a disturbed blood picture, fibrous tissue changes in internal organs, and inflammatory or ulcerative changes in the intestines. These, however, are happily becoming more rare with an increasing refinement of technique. In regard to the nausea, that which is produced by bad air and other electrical disturbances within the X-ray operating room is of very transient nature, but that which comes as a direct result of X-ray action upon the enteric mucosa is distressing. It may last a week or more, following an intensive course of deep radiation. Patients vary greatly in their susceptibility to this. There are some who do not become nauseated when subjected to a most intensive course of radiation. The blood changes and anemia are due to a perverse biologic action upon the lymphocytes, which are very susceptible. The red cells are more resistant, but even they would probably succumb to prolonged intensive radiation. Prolonged action upon any of the abdominal organs sets up destructive changes in the intestinal canal, acting primarily upon the intestinal flora, where coagulation and localized necrosis may occur in susceptible fields. This is followed by a production of tox albumins, the absorption of which may be attended by a distressing clinical picture, accompanied by colitis, bloody stools, and a general physical depression. Recovery is usually prompt upon cessation of the radiation. This clinical picture, however, is obtained only when attacking an extensive abdominal malignancy, where the results are at least equal with those of surgery, and as the radiative sequellae do not measure up in intensity with those of surgical shock, the end comparison is obvious.

The writer has been making use of this deep X-ray therapy for a little over a year. During this time he has subjected a great many patients, with various suitable lesions, to an intensive course of deep therapy, making serviceable all the factors which enter into the approved methods of application. He feels that, while a great advance has been made and that results heretofore impossible to obtain have accompanied this new method, yet not sufficient time has elapsed to properly placard results with mechanical precision. It appears that with the short waves a greater range of clinical conditions can be encompassed, but that in our attack upon gross pathology we still have to reckon with every therapeutic agent which has heretofore been given us. That in this attack, the new short wave X-ray is the most formidable weapon so far produced, can now be considered an undisputed fact.

The present development of radiation as applied to treating the sick makes it imperative that the medical man guard this with the utmost rigor, to keep it from becoming the property of the charlatan, who is already encroaching upon the traditional rights of our profession. It is high time that the general practitioner of medicine and surgery sever all connection with the lay radiographer and the commercial laboratory, and jealously guard this potent force from becoming common property. Too much can scarcely be said about the dangers associated with high voltage X-ray work, the knowledge and prevention of which tax

the skill and ingenuity of the highly trained physician and electrical engineer. The medical profession as a whole is aware of this fact, and also that a political layman placed before the last California State Legislature a bill to permit other laymen to take this dangerous agent and use it upon an innocent public under restrictions which are pitifully inadequate, both as to the qualifications of those who may use this agent and as to the limitations placed upon its use. That such an act should be permissible in this enlightened age is merely another instance of the commercial greed of the medical parasites who, with the aid of politicians, are continuously undermining the standards of scientific medicine and surgery, and flooding the country with a host of undesirables, perhaps more threatening to our civilization than the Red Bolsheviks of Russia.

Note by Author—Bill referred to passed Assembly and State Senate about six weeks after the presentation of above article. When it reached the Governor's desk for his signature, a flood of protests from some of the members of the California medical profession caused him to withhold his signature and thereby nullified the act. In the last meeting of the American Medical Association, a resolution was adopted by the House of Delegates, recommending that radiology be considered an integral part of the practice of medicine and surgery. (1407 South Hope Street.)

Health as a Means and Not an End—The trouble with these groups who follow the teachings of fad-dists and special cults is that health is thought of as freedom from disease, as an end. This view is quite commonly expressed, and in these days of great interest in the health movement it constitutes a real danger. It may be stated categorically that health should never be sought as an end, except perhaps by the individual sick in bed. To be conscious of bodily processes, to think too much about one's self, is not only undesirable socially, but also is distinctly unwholesome for the individual. No person may with impunity be too greatly concerned about his health; for, the moment he does, he runs the risk of losing it.

The health motive must be made secondary to objective interests and achievements. As educators it is important that we sense this relationship and guide the program of teaching toward goals of service rather than toward those of personal achievement. Health is to be viewed therefore only as a means for the accomplishment of worth-while things for the world. "Health for health's sake" is not an acceptable slogan. The poseur and the dilettante in health are no more acceptable than the poseur and dilettante in art. That splendid specimen of man power, that wonderful organization of vitality in the healthy woman—are such sufficient unto themselves? Surely no educational theory would seek to justify the development of mental power for its own sake; likewise it will find impossible the plea of those who seek health for health's sake. Rather will it defend the view that health is only of value, only of significance, as it is used in socially desirable ways. The social consciousness of our day asks that we act as trustees of life, enriching it where we may, but always conserving it for worthy ends, ready to spend it all if the demand be great enough.

Health as freedom from disease is a standard of mediocrity. Health as a quality of life is a standard of inspiration and increasing achievement. The hope may be expressed that the great interest in health education today shall be directed toward not only scientifically acceptable goals, but also goals that shall be worthy.—(Jesse Feiring Williams, Hygeia, September, 1923.)

HEART FAILURE: ITS UNDERLYING CAUSES, CLINICAL MANIFESTATIONS AND TREATMENT*

By WILLIAM J. KERR, M. D., San Francisco
(From the Medical Division, University of California Hospital.)

The increasing death rate from cardiovascular disease is attracting widespread attention. As the expectancy of life rises, we see more individuals reaching the age when certain vascular and myocardial disorders are prone to occur. We are constantly seeking the underlying causes of these maladies which we are called upon to treat, keeping in mind the idea of prevention. These causes probably often lie hidden in the earlier period of life associated with infections, intoxications, nutritional disorders, congenital malformations, hereditary, and other obscure factors. Medicine of the future will probably deal more with the prevention of such of these as are preventable when the methods by which they are produced are more fully understood. The role of the clinician in the treatment of end results of disease is too often unsatisfactory and much like the patch-work of the cobbler. This is probably more applicable to cardiovascular disease than of any other group.

With the increasing morbidity and mortality from cardiovascular disease, we would have a clearer conception of heart failure, its predisposing causes, clinical manifestations, and treatment. Unfortunately, the only notion many physicians have of heart failure is conveyed to them by heart murmurs or irregularities. They neglect the most important factor in estimating the efficiency of the circulation; namely, the efficiency of the heart muscle itself. The back-pressure theory has done much harm by directing attention away from the physiological functions of the heart muscle. MacKenzie's conception of a "rest force, which is employed to maintain an efficient circulation when the body is at rest, and a "reserve force," which is called into action when effort is made, is more readily acceptable. The "reserve force" is the first to suffer and, if the damage is extensive enough, the "rest force" is impaired and the body even at rest shows evidence of inefficiency resulting in dropsy, dyspnoea, and a multitude of other signs which may be included in the wide sense under the term "heart failure." MacKenzie's definition of heart failure is a broad one—"Heart failure may be defined as the condition in which the heart is unable to maintain an efficient circulation when called upon to meet the efforts to the daily life of the individual."

THE UNDERLYING CAUSES OF HEART FAILURE

When we seek to correlate the pathological changes in heart failure with the clinical manifestations, there is great variation and confusion. Our findings are in no better accord than are the pathological changes, clinical symptoms, and signs and functional studies in renal disease. The parallel serves to point out the importance of recognizing functional efficiency rather than structural changes

*Presented to the Section on Medicine at the Fifty-second Annual Session of the California Medical Association, San Francisco, June, 1923.

in dealing with these two vital organs. The frequency with which heart failure ensues with no demonstrable lesions in the heart muscle is of significance. Instrumental methods as an aid in detecting and understanding the irregularities have served to clear up some of these obscure relationships. Others await more delicate methods of study.

The conditions which precede and which are often confused with heart failure may be classed as (1) infections usually rheumatic and not including syphilis, (2) syphilitic infections, (3) arteriosclerosis, (4) nephritis and hypertension, (5) thyroid disease, (6) congenital defects. These various groups usually occur at certain age periods, and lead to changes in the heart muscle which may bring about heart failure. They may be spoken of as predisposing causes of heart failure. They are probably not the only predisposing causes, but make up a great majority. Just when in a given case heart failure will take place is difficult to determine, but we can prophesy in a general way within the various groups. We know from experience that patients with continuous hypertension usually terminate with heart failure. Patients with rheumatic valvular disease run a progressive course with heart failure developing sooner or later, the nature of the symptom-complex usually depending upon the location and extent of the valvular and myocardial lesions. Thyroid intoxications if unrelieved lead to extensive damage of the heart ending in heart failure. Syphilitic disease involving the aortic valve tends to early heart failure. Arteriosclerosis may manifest itself in a variety of ways. Among the most frequent consequences are obstructive lesions of the coronary vessels with degenerative changes in the muscle supplied by these vessels resulting in ultimate heart failure. Subacute and acute endocarditis associated with septicemia and presenting a rather uniform clinical picture seldom die of cardiac failure, but more frequently as a result of septicemia, embolism, pneumonia, or nephritis.

The recent widespread use of instruments of precision in the study of heart disease has been of great service in clearing up the mysteries of the irregularities. The present extent of our knowledge in this field makes it possible for the well-trained clinician to dispense with instrumental means of diagnosis in most instances. To the great majority of practitioners, however, irregularities spell disaster. This is evidenced by the frequency with which patients with sinus arrhythmias are referred for electrocardiogram and opinion. Instrumental means have shown the frequent occurrence of such irregularities as paroxysmal auricular fibrillation, paroxysmal auricular flutter and paroxysmal tachycardia which formerly were considered synonymous with heart failure. We now know that even permanent auricular fibrillation and complete heart-block may be compatible with an active muscular life without signs of heart failure. There has been much discussion concerning the importance of extrasystoles or premature contractions and, when further work has been done over a period of many years in patients presenting such irregularities, we shall probably attach more significance to them. Recent studies with quinidine have served to throw

new light on the nature of some of these irregularities, particularly in auricular fibrillation.

CLINICAL MANIFESTATIONS OF HEART FAILURE

When we attempt to enumerate the clinical manifestations of heart failure, we are confronted with a seemingly hopeless task. We see patients whose "reserve force" is encroached upon to the slightest extent and who show dyspnoea only on severe exertion. At the other extreme we see patients whose "rest force" is so impaired that they are unable to undergo the slightest exertion without marked dyspnoea, with extensive passive congestion, cyanosis, and other associated signs. Between these lie all gradations.

Among the earliest symptoms to be noted in the congestive type of heart failure are dyspnoea with severe exertion; slight cough toward the end of the day; varying degrees of precordial and substernal pain; upper abdominal pain associated with distended liver, congested stomach or pain referred from the heart muscle or pericardium; and such symptoms as giddiness, palpitation, and a feeling of faintness. The latter group are subject to a variety of interpretations, as patients differ widely in their description of such symptoms. As the failure becomes more severe, the symptoms tend to increase; the dyspnoea and cough show a definite advance; such signs as dependent edema appear late in the day; the heart shows variable degrees of enlargement; irregularities may be present; the vital capacity is reduced and passive congestion is more evident. Venous engorgement appears; the venous pressure is increased and pulsations in the peripheral veins, as well as the jugulars, may be noted. The urine begins to show signs of the renal congestion present. With the onset of the more advanced stages, the above-mentioned symptoms and signs increase until marked dyspnoea and orthopnea are present, and prevent the patient from undergoing the slightest effort. The congestive signs are now extreme, anasarca appears, the vital capacity is markedly reduced and, unless proper treatment is instituted, death is likely to ensue.

While this picture illustrates the sequence in a considerable number of cases of heart failure, there are many cases where few or none of these symptoms may be found. Patients with hypertension, syphilitic infections of the aortic valve, rheumatic endocarditis involving primarily the aortic valve and others may, when presenting quite efficient circulatory systems, suddenly develop a pulmonary edema, and die. Patients with the symptom complex of angina pectoris may die in the first attack or may suffer for years and die of some other condition. Myomalacia may develop without warning from embolism or arterial occlusion, and lead to fibrosis or aneurysm of the heart wall without presenting the usual signs of congestive heart failure. A heart wall may rupture with sudden death of the patient without giving rise to signs of warning. The inception of unusual rhythms may herald the onset of heart failure, and such irregularities as ventricular tachycardia or ventricular fibrillation may cause death without previous symptoms or signs of heart failure. Stokes-Adams syndrome may

be observed in patients over periods of many years without great impairment of the circulation, or death may ensue in one of the attacks.

TREATMENT

The greatest degree of success in treatment is to be achieved in the group spoken of as the congestive type of heart failure. Rest is most essential. If the condition is moderately advanced or severe, the circulatory system should be relieved as much as possible by limiting the fluid intake, free purgation, and diuresis. Collections of fluid in the body cavities interfering with respiration or heart action may be removed. Karrel diet may be employed during the first few days if the edema is excessive. After this a dry diet should be given and should only meet the bodily needs. The comfort of the patient is of extreme importance throughout treatment. Patients with orthopnoea should be well supported in bed or chair with a firm, well-padded board or contrivance upon which to rest the arms, and relieve the embarrassment of respiration. Pain should be relieved by small doses of morphine, especially during the first day or two of treatment, as pain prevents proper rest. The drugs employed depend entirely upon the conditions present. If auricular fibrillation is found and the rate is rapid, digitalis should be started at once. The preparation must be of known potency and should be given until results have been obtained unless toxic symptoms prevent further continuance. This may be given rapidly by the Eggleston method or preferably by 4 cc. doses of standardized tincture every six hours over a longer period of time in general practice. It matters little in what form the drug is given, so long as the clinician knows his preparation. It is deplorable to see how badly we administer such a valuable remedy. Despite the many noteworthy contributions on the subject, many clinicians continue to prescribe ten drops of a tincture of doubtful source when we have demonstrated to students for years that it takes from thirty-five to sixty drops with the ordinary medicine dropper to make a *cubic centimeter*, which is the *standard dose of a standard tincture*. We should either have at hand calibrated droppers or graduates for the patients to use or dilute the tincture, and give in teaspoonful doses. It would be preferable, however, if we dispensed entirely with the tincture except in hospital practice, and gave the dried leaf in 0.1 gram or 1½ grain doses in pill or capsule form. The hypodermic or intravenous use of digitalis preparations are seldom necessary and their use too often unsatisfactory because they are given in hopeless conditions.

A drug such as caffeine sodio-benzoate is often of value, especially in patients with hypertension and cardiac failure to relieve respiratory irregularities. Caffeine may prove to have some value when given intravenously in emergencies for cardiac or circulatory failure. When syphilis is an underlying cause of heart failure, proper treatment with iodides, mercury, and the arsenicals may be of great

value, but should be given with great caution. Quinine compounds, especially quinidine preparations, have been of great value in controlling some of the irregularities. Auricular fibrillation responds to treatment in a majority of the cases, and further attacks may be prevented by its continued use. In this way quinidine relieves the heart of conditions which interfere with the proper function of the heart, and in so doing aid in the treatment of heart failure.

Patients with pulmonary edema may respond to bleeding, especially with right heart failure. Patients who have for long had hypertension and who present pulmonary edema with a low blood pressure probably should not be bled. Atropin or adrenalin may here be of value. In those who have had hypertension and who slowly or periodically show signs of heart failure, it is interesting to note that symptoms and signs are present if the pressure falls below a certain high level. Some of these symptoms and signs are congestive in type. Others are mental. Other patients may present cerebral symptoms only when the blood pressure is high. Whether these episodes are spasmodic in nature, it is difficult to say. It is frequently found that there is a narrow limit of circulatory efficiency in which the patient appears to be most comfortable. The treatment of this group is most difficult and often very unsatisfactory because of the economic and other factors which cannot be controlled.

The thyroid hearts respond well to treatment if the damage is not too extensive and do not offer any special problem if the disease of the gland can be corrected.

The arteriosclerotic heart presents such a variety of symptoms and signs that no definite criteria can be laid down for treatment. The activity of the individual should be limited to what the heart is able to do. Iodides may be of value. Mercury does no harm. Attacks of angina pectoris usually respond well to nitrites. Surgery for nerve resection may be tried. The persistent pains associated with extensive damage of the heart wall do not respond so well, and usually indicate an early death.

SUMMARY

Heart failure should be recognized as the inability of the heart muscle to maintain the circulation for the ordinary needs of the individual. It is not expressed in terms of murmurs, irregularities, pain or other signs or symptoms, which may be associated, but rather as the result of a variety of underlying causes which act to render the function of the heart muscle ineffective.

The clinical manifestations of heart failure are obviously manifold and variable, based upon a broad interpretation of the term. The manifestations of congestive heart failure represent the common group and have many points in common.

The treatment of heart failure is more satisfactory in the congestive group. Syphilitic infections of the heart respond well to judicious treatment. A drug, as useful as digitalis, especially in the pres-

ence of cardiac failure with auricular fibrillation, has an established place in our armamentarium. Ten drops of a standard tincture, given with an ordinary dropper three times a day, can have no conceivable value in such cases. The further use of the tincture for home administration is to be deplored, unless given in known dosage of a standard preparation until results have been achieved.

DISCUSSION

Dudley Fulton, M. D. (Pacific Mutual Building, Los Angeles)—The broad conception of heart failure and its treatment, as expressed by Kerr, represents the best clinical teaching. Certain points should be emphasized. There is no parallel between the pathology of the heart, as ascertained by physical examination, and its functions. While murmurs are important in the diagnosis of organic disease of the heart, they play a very minor role in prognosis, since the heart may maintain the circulation over prolonged periods with any one of its valves totally destroyed. The functions of the myocardium form the ground-work of the present knowledge of the heart. In one of the largest clinical groups, the cardiac disease associated with hypertension, nephritis and arteriosclerosis, the evidence is strong that the initial pathology arises elsewhere in the vascular tree than the myocardium, probably in the smallest arterioles, the cardiac and the renal changes being secondary processes. The term "circulatory failure" in this group is more accurate than "heart failure."

This conception broadens therapy to the adoption of measures conducive to the maintenance of the circulation as a whole rather than to stimulation of the heart.

Emphasis should be given another important principle enunciated by Kerr. While we can never repay our debt to the stethoscope and electrocardiograph, their employment having given us interesting and valuable academic details concerning the functions of the heart, we must admit, however, that it is bed-side study and observation that gives us the practicable information as to how sick our cardiac patient is, and what should be done for him. Instrumentation has been overdone in that the examination of the patient himself is neglected.

Of first importance are the subjective symptoms of the patient. They present the earliest and most dependable evidences of a failing circulation. This includes the proper interpretation of dyspnoea and precordial distress, following anything which increases the heart beat, such as exertion, meals, and mental excitement. A consideration of edema of the liver and extremities, lessened urine output, cyanosis and pallor clearly outvalues the timing of a murmur. It is interesting that disturbed cardiac rhythm offers the best indications for drug treatment. While digitalis is always indicated in broken compensation of the heart, its effects are usually disappointing except in auricular fibrillation and sometimes auricular flutter.

We disapprove, however, the use of the very large doses of digitalis recently advised, except by the cardiac expert, in the disturbances mentioned above. McKenzie considers that digitalis is as sharply limited in diseases of the heart as quinine is in fevers.

The same criticism, in our opinion, applies to quinidine. Its use in general practice should be deferred until its precise indication and dosage are better determined than at present. Disaster has followed its use in a sufficiently large number of reported cases to justify this conservatism.

Dr. Kerr (closing)—I am very glad to have the opinion of Dr. Fulton on the points which I brought out. His wide experience in internal medicine makes these opinions extremely valuable.

THE ESSENTIAL POINTS IN THE TREATMENT OF DIABETES WITH INSULIN *

By W. D. SANSUM, M. D., and
N. R. BLATHERWICK, Ph. D.

(From the Potter Metabolic Clinic of the Santa Barbara Cottage Hospital, Santa Barbara, Calif.)

The work of Banting and Best and their associates in the isolation and clinical use of the sugar-metabolizing hormone, insulin, and its specificity in the treatment of diabetes is now well known and accepted. There remains the general problem of further perfecting the methods of its use.

Since the advent of insulin, 250 diabetic patients have been admitted to this clinic. Of these, 150 have been severe enough to warrant the use of insulin. It is beyond the scope of this paper, which is intended to outline methods of treatment only, to present the clinical data at hand. The clinical results from the first 100 cases have been carefully summarized and will appear at an early date in the *Journal of Metabolic Research*.

In the treatment of diabetes there are three objects to be attained:

1. The patient should be kept continuously "sugar free," and the blood sugar should be normal.
2. The patient should be kept continuously free from acidosis.
3. The patient should be nourished as evidenced by a satisfactory weight.

These conditions may be fulfilled, in many instances, by careful dietary procedures, although when a patient's tolerance is very low, continuous bed-rest is necessary to avoid a serious loss of weight. If the disease becomes progressively worse, as it usually does in severe and untreated cases, a stage is finally reached when the patient can no longer be kept free from sugar and acidosis, even if the most careful attention is paid to the diet and the patient is kept continuously in bed.

Many patients wait too long before beginning careful, dietetic management, and specialists in the treatment of this disease are, therefore, not given a fair chance to do the best work. Dr. Joslin has collected the statistics, showing the advantages of careful treatment. Between the years 1814 and 1914 the death rate from diabetes in patients who were treated in the best hospitals was 28 per 100 per year. The year 1914 marked a significant advance in the dietary treatment. The principles outlined in the first paragraph were carefully adhered to. In patients so treated the death rate has fallen to 4 per 100 per year.

By the use of insulin, the death rate from diabetes may be reduced to zero if the patients are seen before deep coma has developed, and patients who would otherwise remain chronic invalids may be restored to health by ample diets in proportion as this specific extract becomes available. At the present cost it is not available to all. It is not a cure for diabetes. Patients will need to exercise greater care than ever with their diets, but since these diets will be ample for their needs, they will be fully repaid for the additional efforts.

* Presented to the Section on Medicine, San Francisco, June, 1923.

In the treatment of diabetes with insulin there are four conditions that should be satisfied:

1. The sugar-burning or utilizing power of the insulin, in grams per cubic centimeter, should be known.

2. The patient's natural tolerance should be determined in grams of sugar-formers.

3. The exact value in sugar-formers of the proposed diet should be known.

4. The dosage of insulin may then be adjusted to make up the difference between the sugar-formers of the proposed diet and those of the patient's natural tolerance.

The sugar-formers of the diet designated by "G," Woodyatt, are 100 per cent of the carbohydrate, 58 per cent of the protein, and 10 per cent of the fat. It has long been known that all starches are changed into sugar during the process of digestion. When the protein molecule is digested it is split into proteoses, peptones, and eventually into amino acids. Some of the amino acids may be changed into sugar, while others may be changed into fatty bodies. The neutral fats are the glycerolesters of fatty acids. Glycerine is a sugar-former. The reduction of food values and tolerances to the common denominator sugar-formers very materially simplifies the calculations.

1. The sugar-burning power or utilizing power of the insulin should be accurately known. Eli Lilly'sletin is evaluated in rabbit units. In our experience, their present unit is worth a little less than 1 gram of sugar-metabolizing power. Their H-20 product, which indicates 20 rabbit units in each cc., has a sugar-metabolizing power of 17 grams.

2. The patient's tolerance may be determined by diet alone or by diet plus insulin. When diet alone is used, the patient is desugarized by partial starvation. When sugar-free, diet additions are gradually made. A diet is eventually found upon which the patient can remain continuously free from sugar in the urine and with a normal blood sugar. Suppose such a diet contains 35 grams of carbohydrate, 38 grams of protein, and 83 grams of fat. The sugar-formers of such a diet are 100 per cent of 35, plus 58 per cent of 38, plus 10 per cent of 83; or 35 plus 22.04, plus 8.3, or 65.34 grams. We would say that such a patient has a natural tolerance of 65 grams of sugar-formers.

In the terminal stages of diabetes, patients do not endure starvation well, both because of the existing acidosis and their already marked emaciated conditions. Many of them cannot be desugarized by any dietary procedure, since their natural tolerances are too low to permit of even bed-rest maintenance diets. In such cases, tolerances may be determined by diet plus insulin. If the acidosis is not too severe, a patient may be given a bed-rest, maintenance diet similar to the above which contains a little more than 1000 calories, with 65 grams of sugar-formers. Small doses of insulin are given at first. The insulin is gradually increased until the patient is continuously free from sugar. Suppose that it requires 60 grams of assistance, in the form of insulin, to carry the above diet, the patient's natural tolerance

would then be 65 less 60, or 5 grams of sugar-formers.

If the patient has a severe acidosis, no attempt is made to measure the patient until the acidosis is controlled. We control the acidosis by giving the patient a diet rich in carbohydrate, low in protein, and as free as possible from fat, such as an oatmeal, skimmed milk, orange juice diet, using comparatively large doses of insulin, which, as it metabolizes the carbohydrate, will in turn metabolize the fat, and thus dissipate the acidosis.

3. The exact value of the proposed diet should be known. We consider 80 to 100 grams of protein as ample for the needs of an adult. In adjusting the fat we have followed the formula of Woodyatt's optimal diets, never letting the fat actually oxidized exceed two times the carbohydrate plus one-half the protein. Following this plan, a diet "G" of 65 will carry approximately a 1000 calorie diet, and a diet "G" of 120 will carry a 2000 calorie diet.

4. The adjustment of the dose. Suppose that the natural tolerance of a patient, as determined either by diet or by diet plus insulin, is found to be 65. Suppose that the proposed diet contains 133 grams of sugar-formers. The patient will need 133, less 65 or 68 grams of assistance; 68 divided by 17 will then equal the number of cc. of the Lillyletin required, or 4 cc. In our experience, we have found that in the majority of patients, with an equal distribution of food between the three meals of the day, that $\frac{5}{8}$ of the total dose should be given before breakfast and $\frac{3}{8}$ before supper. In this instance, we would give 2.5 cc. before breakfast and 1.5 cc. before supper.

THE SYMPTOMS AND TREATMENT OF THE OVER-DOSAGE WITH INSULIN

When a rabbit is given an excessive dose of insulin the blood sugar rapidly falls. When it reaches about .04 per cent, convulsions occur, which are promptly relieved by the administration of glucose.

Patients may also become too sugar free from an overdosage with insulin. This may occur from unfamiliarity with the drug. It occurred with us more frequently in the past when the strength of the insulin was not standardized as well as it is now, especially, as with improved methods of preparation, we were making more potent extracts. It may occur if a patient's tolerance is unknown, and if his diet is not carefully estimated, when it would be impossible to properly adjust the dose, even if the value of the insulin were accurately known. Overdosage with insulin excusably occurs in the first few weeks of treatment when, by keeping the patient continuously free from acidosis and urinary sugar, his tolerance usually grows very rapidly. Under these conditions, the symptoms of overdosage are usually mild and easily treated if the patient is taught to recognize them early.

THE SYMPTOMS OF OVERDOSAGE

1. Hunger—As a patient's blood sugar falls, he usually experiences a keen appetite. This is not a very reliable symptom, because nearly all diabetic patients are notably hungry.

2. Slow Mentality—A patient complains that

he cannot think well or concentrate on any one thing.

3. **Extreme Weakness**—This is probably the most reliable early symptom. When a patient is metabolizing an ample net diet, he should feel well and strong, but as he is overdosed with insulin a feeling of weakness comes on. Sometimes patients describe this as a dizzy feeling.

4. **Rapid Pulse and Respiration**—The pulse is usually weak and the respiration rapid.

5. **Visual Disturbances**—The patient complains of an inability to read, due to double vision or the blurring of the print. He cannot see to write well. The eyes may ache and dark spots may appear before them.

6. **"Shaky Feeling"**—The word "shaky," or "The Shakes," are terms that have been coined by patients to describe this sensation and, though not particularly scientific, describe the condition very well. The patient simply shakes all over. He is not cold, nor are these symptoms associated with or followed by appreciable elevations of body temperature. We believe that this symptom is nature's method of causing the glycogen which has been stored in the liver and muscles to be changed into glucose and poured into the blood stream.

7. **Sweating**—The "shaky" feeling is always followed by a profuse sweat. This must be watched for, especially in new patients, since it is a very reliable symptom.

8. **Unconsciousness**—If a patient has been too seriously overdosed he may become unconscious, falling into a deep sleep from which it is impossible to rouse him until sugar has been administered. At this stage he cannot be forced to swallow fluids.

9. **Convulsions**—If the overdose has been still greater, convulsions may occur. Fortunately, these are very rarely seen in patients, but are a common occurrence in the rabbits. In our experimental evaluation of insulin we have used thousands of rabbits, and in thousands of them such convulsions have been produced, but despite such marked overdosage, only a few have died in the entire series. The intravenous administration of 5 cc. of a 20 per cent solution of glucose restores such convulsed rabbits in two or three minutes.

THE TREATMENT OF THE OVERDOSAGE WITH INSULIN

The treatment of the overdosage with insulin is undoubtedly started by nature as she changes the glycogen stores into sugar and pours them into the blood stream. In this clinic, whenever a patient experiences the slightest symptoms of being too sugar-free, 20 grams of milk chocolate, having a food value of carbohydrate 10, protein 2, and fat 7, are given at once, followed by or dissolved in hot water. No attempt is made to determine whether the urine or blood is too free from sugar, for we much prefer to give this emergency ration many times when it is not needed rather than to omit it once when it is needed. The milder symptoms, such as hunger, are promptly relieved by serving the tray a little early. The patient in the early stages of treatment is instructed never to leave the hospital without the emergency, chocolate ration. Many other substances containing

sugar-formers could be used and are used in lieu of the chocolate. In the beginning we used white crackers, but the starch must be changed into sugar before it can be absorbed. Later we used whole milk, but half-pints of whole milk do not stay sweet any appreciable length of time and are difficult for the patient to carry around with him. Orange juice, when available, is an excellent form of a rapidly assimilable carbohydrate. Adrenalin may be administered hypodermically, which causes the body to rapidly change large quantities of glycogen into sugar. In our experience, the milk chocolate, especially when followed by or dissolved in hot water, has proven to be an excellent form of medication. It is also very acceptable to the diabetic patient who, for so many years, has been without candy. Patients often welcome too sugar-free symptoms because of the chocolate candy reward, and oftentimes nibble away at the chocolate to make it last as long as possible, when they should eat it as rapidly as possible.

If a patient cannot swallow, glucose should be given by vein at once. We keep on the hospital floors a number of ounce bottles of sterilized 50 per cent glucose and a 25 cc. syringe sterilized for instant use, although we are rarely obliged to use this type of medication. We have had no fatalities from an overdosage with insulin.

DISCUSSION

Samuel H. Hurwitz, M. D. (516 Sutter Street, San Francisco)—The great value and the specificity of insulin in the treatment of diabetes mellitus has already been conclusively proved. Now that the use of this extract is to become more general among the practitioners of medicine it is very important to acquaint them with its indications, method of use, and symptoms of overdosage. This has been well accomplished by Dr. Sansum's simple and straightforward paper. It is particularly gratifying that he has emphasized the importance of dietary treatment in connection with insulin and the fact that we shall need to exercise even greater care with our diets than heretofore, so as to establish in each individual patient a balance between dietary needs and insulin dosage. Where this is carefully done there need be little fear of the symptoms of overdosage which Dr. Sansum has given so vividly.

In this connection I should like to correct the impression which it appears exists among some physicians that the use of insulin will do away entirely with the necessity for moderate undernutrition. The fundamental principles upon which low caloric diets have been used in treating diabetes still remain. These diets will still continue to serve as a very useful method of resting pancreatic function and of thereby improving the patient's tolerance. But the extreme grades of undernutrition necessary in severe cases in pre-insulin days need no longer be resorted to where insulin is available. It has been the practice in our clinic to give patients a diet which, although adequate to regain health and strength and to maintain normal activity, was nevertheless a little lower rather than a little higher calorically. We have felt that it was wiser to err on the side of lower rather than higher diets. This has not been easy to do at all times because we have had, in the first instance, to yield to the patient's cry for more food, and secondly, because of the widespread misinformation existing among patients that, with insulin available, they could partake of many glucose-forming foods which had been denied them heretofore. Although this is true to a limited extent, we have had to

emphasize to these patients on numerous occasions that they were paying too dearly for the whistle, and that an additional slice of bread or one-half of a cantaloupe was not worth the price of the insulin used to burn them with. Besides, this would violate the principle of rest as applied to pancreatic function.

The sugar-burning power of insulin, Lilly has not been found by us to be a constant one. In some of our severe diabetics the glucose-utilizing power of one unit of insulin was found to be less than one gram of glucose; whereas, in some milder cases, one unit of insulin was found to be the equivalent of five or more grams of glucose.

W. D. Sansum (closing)—We are very pleased that Dr. Hurwitz has emphasized so strongly the importance of exact dietary procedures.

We are attempting to restore all patients as rapidly as possible to a normal weight, because, when fully nourished, patients require somewhat less food for the same activities than do the undernourished ones. A layer of normal, subcutaneous fat appears to be an appreciable asset in the conserving of body heat.

In our experience the present iletin unit is not as strong as was the original unit. When the unit was defined as the amount of iletin necessary to produce a convulsion in a one-kilogram rabbit, we found this unit worth approximately 1.25 grams of sugar-metabolizing power. With the new definition of the unit as one-third of the iletin necessary to produce a convulsion in a previously starved, two-kilogram rabbit, we have found the value of the unit in the neighborhood of .85 grams.

Our experience has been different from that of Dr. Hurwitz, in that the sugar-metabolizing power of the unit has not varied appreciably in patients of different degrees of severity. We have also found no appreciable variation with age and weight or with low and high diets. We believe that the comparatively high values given by some workers to the iletin unit in the milder cases should have been credited to growths in natural tolerance, for in a number of such instances we have re-measured patients dietetically and found growths in tolerance sufficient to convince us of the constancy of the sugar-metabolizing power of the unit in a given lot number.

Household Nursing Association—In another column we print an article outlining the work of the Household Nursing Association of Boston. This institution has not attracted the attention of either the public or the profession which it rightly deserves. It has not sought publicity but has quietly perfected its organization and raised its standards while it has been supplying a type of economical and efficient home nursing care for patients of moderate means.

The demand for such nursing has been recently receiving more attention from important medical sources but it should be a matter of local pride that public spirited citizens and physicians of Boston have anticipated this demand and to the extent of their ability have been supplying it for the last ten years. The highly trained graduate nurse has become a necessity but is often a problem as well. The old-fashioned attendant nurse is often a far more difficult problem but sometimes a necessary substitute. Supervised attendant nurses of good character and trained by a standard curriculum in the simple household duties of caring for the sick will go far toward solving these problems and will soon we believe take their place as necessary adjuncts to the efficient and kindly care of patients of moderate means. We urge our readers to become acquainted with this association's work and give it their support.—Editorial Boston Medical and Surgical Journal, May 10, 1923.

THE ETIOLOGY OF GASTRIC AND DUODENAL ULCERS*

By GEORGE E. EBRIGHT, M. D.,
University of California Medical School

It is evident upon reviewing clinical experiences and the literature upon the causation of gastric and duodenal ulcer that the etiology of these conditions cannot be reduced to a very simple formula. A varied number of conditions may induce ulceration of the stomach. It occurs in association with traumatism, diseases of the central nervous system, renal and cardiac diseases, anemias, burns; but particularly since Virchow in 1855 emphasized the probability of vascular conditions playing a role in the production of ulcer, has attention been directed to embolism and thrombosis, particularly of bacterial origin. In 1857 Lebert injected pus into the venous circulation and produced acute gastric ulceration. Twenty-two years ago Letulle caused gastric ulceration by injecting guinea pigs with streptococci from puerperal sepsis. Clinical experiments for several years past have led observers to notice the association of an acute gastric ulcer with the occurrence of various acute infections, especially tonsillitis and avascular abscesses. The important work of Billings upon focal infections has directed attention to probably the most common cause of not only the occurrence of ulceration, but especially the continued recurrence of the lesion. Rosenow's extensive studies have led him to the conclusion that "streptococci attaining a certain grade of virulence show a selective affinity for the gastric mucus surface." The expression of this view has led to considerable controversy. Moody, after experiments upon rabbits, opposes Rosenow's theory of selective affinity, and found that streptococci from avascular abscesses produced lesions more frequently elsewhere in the body than in the gastroduodenal mucosa. Alanson Weeks is emphatic in his opinion based upon work with war risk insurance cases, that chronic gastric ulcers do not heal until focal infections are cleared up, particularly tonsils and teeth. E. J. Best, in charge of the Gastrointestinal Clinic of the University of California, leans to the same conclusion.

Very considerable experimentation has been directed toward the establishment of a relation between nerve influences and gastric ulceration, and particularly suggestive is that of Gundelfinger, who, after a series of ingenious experiments of vagus irritation, vagotomy, coeliac ganglion irritation, excision of coeliac ganglion, and combinations of these operations, arrives at two conclusions—first, that neither vagus irritation nor vagotomy causes gastric or duodenal ulceration in the dog, but, on the other hand, that coeliac ganglion irritation or extirpation caused erosion or ulceration in a hundred per cent of his cases. Doege expresses the opinion that psychic influence is a very prominent factor, and recalls a case where an individual dated the beginning of his ulcer from a period of highly excited state of emotionalism after an especially full meal. When one remembers the work of Pavlov upon the effect of emotional states on

*Presented to the Section on Medicine at the Fifty-second Annual Session of the California Medical Association, San Francisco, June, 1923.

gastric secretion, it may be readily understood that mental excitation may bring about a disharmony or gastric function that could have the same effect which Gundelfinger described, and, furthermore, it should be pointed out that long-continued mental excitation or depression should be expected to be followed by similar results. A case in point is as follows:

A man, 45 years of age, who had always experienced excellent health suffered a profound grief upon the death of a child, an only son of great promise just reaching maturity, who had been the center of his thoughts and ambitions. Following his son's death, the patient labored under a burden of mental depression, which culminated in nervous indigestion, and he presented himself to me some five months later suffering from a well-pronounced ulcer with severe pain in the epigastrium several hours after eating, which was relieved by food, aggravated by pressure associated with vomiting and slight bleeding, and upon fluoroscopic examination showed a deficient duodenal cap and increased gastric peristalsis. A cure was rapidly effected by neutralizing the gastric contents with frequent meals and sufficient doses of subcarbonate of bismuth.

It is undoubtedly true that, could gastric ulcers be treated as can ulcers upon the surface of the body, they would rapidly heal; in other words, that the effect of the gastric juice is to prevent healing of the ulcer. In the light, however, of the work of Rosenow and others upon the possibility of bacterial origin of gastric ulceration, it is of the utmost importance that infections, especially chronic focal infections, be borne in mind, and that while the teeth, tonsils, and intestines rank first as offenders and should receive the most painstaking attention, it is necessary also to remember the possibility of chronic processes in the accessory sinuses of the nose, the middle ear and mastoid, the uterine cervix and fallopian tubes, prostate, gall-bladder, and appendix.

I believe it is correct to consider two kinds of causes of gastric and duodenal ulceration, exciting and predisposing—that predisposing factors are usually remote such as constitutional diseases, focal infections, etc.; that exciting or immediate causes may be dietary indiscretions, acute infections, and psychic disturbances leading to the condition which is commonly recognized as nervous indigestion. Without emphasizing the latter unduly, it may be stated that alterations in the physiological functions of the stomach and duodenum due to nervous influences are a very frequent cause of ulceration.

(299 Post Street, San Francisco.)

DISCUSSION

Elbridge J. Best—The subject of the etiology of gastric and duodenal ulcer as presented by Dr. Elbright is a very timely one. We are daily confronted by typical cases of ulcer, and the first and certainly most important factor is the cause. To control the cause is to control the disease. The literature on etiology of this is very large, and embraces almost every conceivable possibility. The experimentation is most varied and often very ingenious, but fails in proving the cause, in that most measures are directed to the mucous membrane, which cause acute

superficial ulcers that readily heal. One must go deeper and interfere with the blood supply to the mucosa. And here is the crux of the problem. With the normal abundant blood supply, frequent trauma to the gastric lining allows nothing more serious than a transient lesion that gives no symptoms and heals readily. But we have terminal arteries in the stomach, and if we block the artery at its final branching, a cone-shaped area is deprived of nutrition and not only necroses, but becomes readily acted upon by the digesting fluid constantly bathing the mucosa. Result is ulcer which is slow to heal. The evidence seems to point to clumps of bacteria as the most likely cause of arterial blocking. Endarteritis as suggested by Ophuls is a possibility. We see sudden blanching of the skin in vasomotor constitution. Consequently, it is rational to believe a prolonged spasm of vasomotors in the gastric wall would be equally efficacious in shutting off blood from a circumscribed area of stomach. The same blocking probably takes place in other end arteries of the body, but there being no digesting fluid bathing the dead surface, resolution takes place, with no resulting damage as is seen in the digestive tract.

The recurrence of symptoms in ulcer probably means new ulcer formation. This has been shown in several cases seen by me at operation. Therefore, we not only must keep digestion as nearly absent as possible during the healing of a recognized ulcer, but remove the original cause and prevent the recurrence of fresh ulcers.

The Role of the General Practitioner—The refinements of specialization have disturbed the comfortable balance of the general medical profession until discontent dominates those who have not added letters of qualification to their medical degree, says the New York State Journal editorially.

The general practitioner is ashamed of his classification and many specialists have added fuel to the flame by talking down to their less limited fellows.

There are more specialties than there are organs, or functions, or secretions, or excretions, or regional subdivisions. Some are almost as limited as indicated by a recent advertisement in a daily newspaper: "Situation wanted by a young man handy with a screwdriver."

While it is possible to establish a minimum fee, and while no one now denies the right to as great a material reward as is decently possible to the expert who has given his life to the perfection of his knowledge and of his technique, there really is a humanitarian side to the question which may ultimately dictate limitations.

A well-rated patient, being referred to a group of specialists, in some manner resembles a bottle of certified milk. The psychiatrist, the ophthalmologist, the otologist, the rhinologist, the laryngologist, the radiologist, the special or general surgeons, each one armed with a Chapin dipper, takes off portions of cream until there is nothing left for the general practitioner but skimmed milk, and while the specialist grows fat, the general practitioner starves through protein indigestion.

Fee splitting furnishes no satisfying balm to the discontent of the general practitioner, probably because the practice involves the elements of deception and therefore is not strictly honest. While the high-minded internist likes the increment which he reasons he has truly earned, he does not enjoy a subterranean method. No internist likes to sell an operation and no operator likes to buy one. Should it not be the role of the internist to manage the whole affair with his cards on the table? Should he not say: "The surgeon's fee will be so much, the internist's fee for assisting or for giving an anaesthetic will be so much. The operation is necessary. The decision rests with the patient or with those who are entitled to assume the responsibility." Following such a procedure, there can be no recrimination.

SOME CONCLUSIONS DRAWN FROM THE OBSERVATION OF FOUR THOUSAND CASES OF GONORRHEA TREATED IN A PUBLIC CLINIC*

By ALFRED R. ROGERS, M. D., Los Angeles

We have no means of knowing whether or not primitive man was the victim of venereal diseases. Probably he was not. The natural immunity to these infections which is enjoyed by practically all but the human family would indicate that these diseases have come along with the development of what we are pleased to call civilization.

But venereal diseases are not of modern or even medieval origin. We need no better evidence that they existed in Biblical times than the words of the psalmist, who roars: "For my loins are filled with a loathsome disease, and there is no soundness in my flesh. My wounds stink and are corrupt because of my foolishness. My lovers and my friends stand aloof from my sore; and my kinsmen stand afar off."

This poor chap must have had syphilis or gonorrhea. Probably he had both. He not only recognized the symptoms of his affliction, but he knew from whence they came, for he berates himself unmercifully for his "sin" and his "foolishness."

Furthermore, the name "gonorrhea," which still sticks to one of these scourges, is of ancient origin, born of the ignorance of pathology which our ancestors enjoyed. The name means a "flow of semen" which those ancestors believed the condition to be.

It would be interesting to speculate upon what mode of treatment the psalmist and his brethren used to get relief from gonorrhea. Inasmuch as they knew nothing of the efficacy of potassium permanganate, the silver salts and other gonococciocides now in common use, and as neither osteopathy or chiropractic had been "discovered," it is presumed that they adopted methods similar to those of our present-day Christian Science healers, viz.: prayed for relief and waited until the body built up an immunity to the infection that in some instances finally arrested the disease. While much can be said in favor of our twentieth century methods of treating gonorrhea, all physicians know how much we modern practitioners of the healing art depend upon this marvelous power of the human organism to resist infection. The progress in the study of the pathology, diagnosis and treatment of syphilis during the last twenty years probably has no parallel in the history of scientific medicine. We have also made some progress in the treatment of gonorrhea, but that progress has been a negative one. Whereas, in syphilis we have learned numerous things that we can do to effect a cure; in gonorrhea our added knowledge is, in general, a knowledge of what we cannot do. The new methods of treating syphilis have generally proved successful. The new drugs and other means tried for the relief of gonorrhea have, in general, proved failures. We are, therefore, in the treatment of gonorrhea just where we were a genera-

tion ago, with the added conviction of the futility of the many methods offered to replace the old ones.

In considering germ infections of mucus surfaces with respect to their treatment, we must admit that we have not as yet found a germicide that will eradicate the invading organism without at the same time doing more injury to the tissues than the organism itself would do if left alone. Applications of argyrol or other similar drug to an inflamed pharynx or conjunctiva has the same effect upon the offending germ that it has upon the gonococcus when injected into the inflamed urethra. It may possibly inhibit its growth, but it does not entirely remove it, as anyone can testify that has used this or similar solutions.

We hear frequently of sudden cures obtained by the use of a new or old drug, and we meet occasionally in our own experience with a gonorrheal infection that disappears like magic under the same routine treatment that the one hundred cases immediately preceding it have resisted for months. Recognizing that, under any of the accepted modes of treatment, there will occasionally occur a well-defined gonorrhea that will yield quickly and even permanently to the simplest remedies, it can still be maintained without successful contradiction that we have no method by which gonorrhea can be aborted. The acute infection is in a vast majority of instances self-limited, and the greatest success that the writer has met with has been in preventing the many complications and in preventing the acute infection from becoming a chronic one.

It is the custom nowadays to attribute a little that is good and much that is bad to the World War. Among the good things that came with the conflict was a better understanding of venereal disease as a social and industrial problem.

Prior to the war the treatment of gonorrhea by a large majority of physicians was haphazard and perfunctory, and the clinics for venereal disease were maintained mostly for teaching purposes, with but little thought of ridding the world of a blight that was incapacitating thousands every year. Legislation designed to drive from one community, and of course into another, the sources of these infections accomplished nothing, and less than nothing. The problem was treated as a social one instead of as a sanitary one. With the futility of these sumptuary measures, every student of social and domestic affairs is familiar.

During the war, however, the Government realized the urgent necessity of attacking the venereal curse in a more practical way. Municipal, State, and Federal authorities co-operated, with the result that free clinics were established in nearly all large centers of population, all subsidized by the State, Municipal, and Federal governments. These clinics were established in the interest of society rather than in the interest of the individual. Their prime object was to render the infected person, male or female, non-infectious. In other words, the object was to stop the spread of syphilis and gonorrhea.

Instead of deporting infected women to another field where they would continue to spread the disease, the women and men who were found in-

*Presented to the Section on Urology at the Fifty-second Annual Session of the California Medical Association, San Francisco, June, 1923.

fected and who were spreading the disease were taken into custody or other control, and treatment was instituted to cure them. In both diseases there is a relative and an absolute cure. When the victim is no longer infectious and consequently no longer a menace to the community, he or she may be said to be relatively cured, though the cure may not be and seldom is absolute. The danger, so far as he is concerned after this end is attained, is to himself and not to those with whom he comes in contact either sexual or other.

To secure these relative cures is the most important function of the public clinic. That the clinics are going on and securing absolute cures in all cases that will continue under observation and treatment adds much to their value as sanitary agencies.

It is difficult to estimate the benefit that has accrued from the instruction that has been given to the attendants at these clinics about the nature of venereal diseases and the dangers that attend them. It would seem that, in spite of all effort, the incidence of venereal infections is on the increase rather than going the other way. Nevertheless, the efforts of the medical profession in clinics and in private practice to obtain early cures, as well as to disseminate information in methods of prevention can only result in good, but cannot stem the wave of immorality in social and domestic relations that has come upon us in the last few years.

That the public, as represented by the indigent and those of moderate means, has profited by the opportunity to attend these public clinics has been amply proved. When the Los Angeles municipal clinic was opened in February, 1917, the attendance for the first year was small, and practically all the cases of gonorrhea presented were those of long standing; men who had gone from one physician to another for months or years in an effort to rid themselves of a chronic posterior urethritis.

My own experience at that time was the same as that of many of my colleagues with whom I talked, namely, it was an unusual thing for any of us to see a venereal case in the acute stage.

At the present time at least 75 per cent of the new cases coming to the clinic are acute infections. In 1917-18 it was extremely unusual for us to see a primary lesion of syphilis. Now we see as many as ten or twelve chancres in a week. Undoubtedly this is partly due to the increased incidence of the diseases in our rapidly growing city, but we think that it is also attributable to the general knowledge disseminated through the clinic and other sources, to the effect that the time to begin treatment of venereal disease is immediately after it is contracted. That the chance of a permanent cure is increased ten-fold by this promptness.

In handling this large number of cases of gonorrhea, now close to five thousand, it has been possible to try out most of the new remedies and new methods that have been suggested and urged by sometimes over-enthusiastic physicians and manufacturing chemists. The attempt to improve our results by the use of aniline dyes, combinations of mercury, carbolic acid and other well-known germicides, new silver salts, thermotherapy, vaccines and

serums and what not has been thorough and painstaking. Methods and dosage in accordance with the advice of the manufacturer or discoverer have been followed, and they have been varied in an effort to give them all a fair and impartial trial. There have been times when we have thought that the drug under consideration was giving promise of being a valuable addition to our arsenal of weapons against the gonococcus, but further trial was always disappointing. While I have no desire to condemn any of the new drugs or combinations offered and tested, I most certainly cannot commend them as supplying anything better than those which have stood the test of longer time. After a long and careful and, for my patients, expensive experience with serums and vaccines in acute and chronic gonorrhea, I am convinced that those offered to date are absolutely useless even in so-called gonorrheal arthritis.

Should a patient present himself with an acute gonorrhea and allow the physician to introduce a tube into his posterior urethra from behind, say, through a suprapubic cystotomy, and should the surgeon pass through this tube and the urethra a continuous stream of plain warm water for two or three days I believe that the gonorrhea could be aborted. I do not suggest this procedure for practical application. The end would hardly justify the severity of the means. But it is surprising and gratifying to note how well patients with acute infections do if they will fairly punish themselves with drinking water. The harmless diuresis caused by taking gallons instead of quarts of plain water in a twenty-four-hour period is, in my opinion, the most potent means that we have of curing this disease. It is possible for a man who does not perspire too freely to take sufficient water to force him to empty his bladder every thirty minutes during the day, and every hour during the night. The urine voided under this forced drinking regime is as clear as water from a hydrant and as non-irritating. Every time he voids, he washes the whole canal free from all pus and debris. There can be no doubt that the presence of pus in the urethra for four or five hours at a time is a fruitful cause of the persistence of the infection and of its extension through whatever route to the deeper and less accessible structures. Alkalies and balsams have no use because they are not necessary and may be harmful to the kidneys. What we strive for is as near a continuous flushing of the infected canal as can be secured by the taking of plain water unmixed with drugs either nauseous or other.

The silver salts of which protargol is our choice because of its comparative cheapness, cleanliness and efficiency probably do but little in the way of sterilization of the urethra. If, however, they are introduced at regular intervals and are held in contact with the inflamed mucosa they do produce a freer flow of leucocytes to the part, and these same leucocytes, furnished by the blood of the individual, are the germicides par excellence for this as for all other infections.

In routine work the patients use protargol in 1 per cent solution as a hand injection, filling the anterior urethra full and retaining it there under

pressure for at least ten minutes at intervals of four hours.

Three times weekly each patient, acute or chronic, irrigates his urethra with hot permanganate solution, 1-3000. If the disease is acute and the canal is excessively tender, this irrigation is confined to gently washing out the anterior portion. As soon, however, as the sensitiveness has subsided sufficiently so that the patient can bear the pressure required to overcome the resistance of the cut-off muscle, the fluid is permitted to pass on into the bladder, and the whole canal is flushed with this solution two or three times at each irrigation. The fear often expressed that this anteroposterior washing will force infectious material into the posterior urethra, and there set up an inflammation in a previously uninfected portion of the canal, does not seem to be well founded as acute prostatitis and epididymitis are of less usual occurrence than under any other form of procedure that we have tried.

While posterior urethritis is a common thing, I do not look upon it as a complication or sequel of gonorrhea, but rather as a natural and almost inevitable accompaniment of the anterior infection. It is just as well to start treating gonorrhea as an anteroposterior disease from the beginning, as our efforts to save the prostatic urethra are practically always futile.

Of the surgical complications and sequelae of gonorrhea and their treatment, this paper will not treat. They have no place in the clinic, where all the patients are ambulatory. We very rarely see epididymitis, and then only if the victim has it on first registering. Our statistics show that it practically never has occurred after treatment has been instituted. Of the nearly five thousand cases handled, not more than three or four have developed this painful complication after beginning his treatment. The posterior urethra is a rich and fruitful field for the urologic surgeon. Cicatrices, contractions, cysts, polypi, and other tumors are of frequent occurrence. Many of these conditions are the result of gonorrhea. The vast majority of them are not. The future welfare and comfort of the patient demand that they be treated and relieved, but such treatment is not, strictly speaking, for gonorrhea.

In the early years of this work we made a practice of massaging the prostate and vesicles of most all the chronic cases. The results were anything but favorable, and we have abandoned this as a routine procedure. Urologists and bacteriologists know how seldom it is that pus containing intracellular diplococci can be obtained from the prostatic or seminal-vesicular fluids of these men, who are forever and a day going about trying to rid themselves of their morning drop or of the shreds that they occasionally find in their urine. After many searches for infective material and after observing that none of these men infect their female partners with gonorrhea, I have arrived at the conclusion that these chronic prostatitis are not, strictly speaking, gonorrhea. They are suffering, in mind mostly, with the results of an old infection which is not transmissible and which if left alone would

in the vast majority of instances never give them any trouble.

If a considerable quantity of real pus can be expressed from the prostate or vesicles and if the patient is distressed with a dragging pain in the region of the prostate or over the pubes and especially if he has an arthritis that cannot be accounted for in any other way, a few efforts to empty these organs of their pathological contents are advisable, but the routine kneading of every prostate that has been the victim of post-gonorrheal infection is as vicious as it is useless.

Material can be expressed from every prostate that has not undergone senile atrophy. If the organ has ever been the subject of an inflammation, this material will be cloudy. It may and usually does contain a few leucocytes. This material, together with an exudate from the cicatrized urethral mucosa, supplies the morning drop and the shred, but if it contains no gonococci it had better be forgotten. I believe that it is accepted now that the wise syphilologist treats syphilis instead of treating the Wassermann reaction. It would be equally wise to treat gonorrhea instead of a harmless exudate, which may or may not be a sequel to a long-closed chapter of gonorrhea.

We find that our acute cases are under treatment under the routine outlined above for a period averaging a little less than two months. At the end of that time they have been free from purulent urethral discharge for at least two weeks. Smears are negative for diplococci. We call them cured. Many of them are married men, and we have yet to learn of an instance of such dismissal resulting in their infecting their wives. Those who handle many cases of gonorrhea in private practice will know how this end result compares with what they are able to accomplish with private cases that are treated as individuals, rather than *en masse* as the clinic patients of necessity are. For my own part, I sometimes wish that my private patients would change and go to the clinic.

Of course, there are always the few, both in private and in clinic practice who continue with a more or less rich urethral discharge for months upon months. Some of these are, of course, continually reinfecting themselves, as they are under no surveillance so far as their conduct outside the clinic is concerned. Others are of those whose natural resistance to this type of infection is low or entirely wanting. After all, this capacity of the human body to build up an immunity to this infection is our greatest aid in accomplishing cures. Instances are not wanting of men who, having had gonorrheal infection numerous times with constantly decreasing severity, will expose themselves to women known to have acute gonorrhea and to come away scott-free having, apparently, established a complete immunity.

To recapitulate:

I would have a patient with acute gonorrhea live and work where drinking water was easily obtainable at all times, day and night. He must never pass a drinking place without taking a glass of water. He must never take a glass of water

without taking three. If he rises to urinate in the night he must drink copiously on each and every occasion. His thirst must not be his guide, but only the necessity of frequently emptying his bladder and thus washing out the inflamed canal.

Protargol as a hand injection and permanganate of potassium as an irrigation accomplish more in the way of local medication than do any or all other drugs that we have tried.

Gonorrhea can be treated in a large clinic, where the methods used are routine and the same for all, just as successfully as they can as individuals. The theory that every case should be treated as an individual in order that he may receive the greatest benefit and the briefest period of treatment, does not seem to be borne out by a comparison with results obtained in clinic and private practice.

Many if not most cases of so-called chronic prostatitis and seminal-vesiculitis, while being gonorrheal in origin, are not gonorrhea per se and should not be treated as such.

The use of sounds, as recommended by many authorities to clear up a chronic discharge, has not proven of any benefit unless there is an urethral stricture back of which is an infective area.

Gonorrhea if ever controlled or suppressed must be controlled and suppressed by the medical profession and their co-workers and not by legislators. It can only be handled as a sanitary problem, which it is. The disease itself is not immoral any more than is any other infectious malady. The fact that it is spread very largely through immoral practices is no justification for us looking upon it as different from any other serious disease from which humanity is suffering.

I am strong for the municipal free clinic. May it live long, and prosper. May the time soon come when it will be open night and day to all comers as a prophylactic station.

(Suite 509, Hamburger Building, Los Angeles.)

DISCUSSION

Louis Clive Jacobs, M. D. (Flood Building, San Francisco)—Any municipal clinic, public clinic, hospital, physician's private clinic or office; in fact, any reputable or ethical place where venereal diseases are treated, should be commended and not condemned. Likewise, the same is true for all the various methods of treating these diseases, excepting those for commercial greed. It is a great blessing to help these unfortunates, and I am of the firm belief that every reputable physician, whether a specialist or otherwise, attempts to do everything within his power to cure these gonorrheics.

It is my opinion that the method of choice in treatment is one of efficiency, and that the specialist is the most efficient of the profession to handle these problems. To be efficient, one must be thorough. To be thorough, he must be conversant with the various remedies to combat this evil. He must have a well-prepared knowledge of the gross anatomy and histology of the urinary tract. Likewise, he must be in the close confidence of his patient, whether male or female. His armamentarium of instruments must be complete. He must be prepared to give his individual time and attention to each case. He must bolster up the morale of each patient and be optimistic, because this class of patients is easily discouraged.

In attempting to be thorough, I insist upon treating my patients daily. I treat them myself with

freshly prepared albuminate of silver solution. The reason that some patients do not respond as readily as others to this form of treatment is that the medication does not penetrate to numerous infected follicles deep in the folds of the mucosa. This necessitates endoscopy and the painting of the inflamed follicles with strong silver nitrate solution.

My experience in treating the male case has taught me the importance of keeping all medication out of the posterior urethra during the acute attack; as it has been demonstrated, both clinically and radiographically, that fluid injected posterior to the cut-off muscle ascends into the seminal vesicles through the ejaculatory orifices.

A patient with a Neisserian infection is not cured until he is free from urethral discharge, pus-shreds in the urine, or expressed pus from the prostate or seminal vesicles.

Many chronic cases have been successfully treated by fulgurating infected follicles of the urethra, and the utricle of the verumontanum.

I thoroughly agree with Rogers in the advisability of having these patients drink large quantities of water, though I have never forced fluids to such a heroic extent as he has.

In those cases having a thin, limpid discharge without definite types of organisms present, I have had good results by utilizing a hand injection of a weak solution of forma-zincol.

Rogers deserves to be highly commended for the excellent manner in which he has handled these four thousand cases, and I am sure that the favorable results reported are due to the efficiency of his methods.

Alfred R. Rogers (closing)—I heartily agree with Dr. Jacobs when he says that all honest efforts to eradicate gonorrhea should be commended and not condemned. Certainly it is not my intention to condemn any such. In our experience in this clinic we have found certain methods to be efficient and others to be, in our hands, disappointing. I feel that the number of cases handled is sufficiently large upon which to base conclusions. The doctor is absolutely right in his remarks about efficiency. No one ever will or ever can accomplish anything of value in this work except the well-trained, well-equipped and conscientious specialist. The sooner we convince these men and women that the Chinese herb doctor and his ilk are inefficient the sooner we will accomplish the desired end which is, to lessen if not entirely to eradicate the venereal curse.

I thank Jacobs for suggesting formo-zincol in stubborn chronic, limpid discharges. I have had fair success with oxycyanide of mercury and weak silver nitrate irrigations.

My object in presenting this paper is to demonstrate the success of the public clinic in rendering gonorrhea non-infectious, and thus to accomplish a social as well as a sanitary benefit to the community.

Tri-State District Medical Association Meeting—

This association, comprising the entire states of Iowa, Illinois, Wisconsin and Minnesota and districts of surrounding states, will hold its annual assembly at Des Moines, Iowa, October 29, 30 and 31 and November 1. Physicians of California (who are in good standing in their State society) are most cordially invited to attend and take part in the program. This association is a purely post-graduate organization. The entire time of the annual assembly is taken up with scientific study. The program committee is made up of Walter L. Biering, E. Starr Judd, Dean Lewis, John L. Yates. The committee on medical advancement and research are Frank Billings, Henry Christian, Lewis A. Connor, George W. Crile, John B. Deaver, John M. T. Finney, Campbell P. Howard, Dean Lewis, Charles H. Macey, John L. Yates. Headquarters will be at Fort Des Moines Hotel.

NOTES ON THE X-RAY TREATMENT
OF WHOOPING-COUGH *By JOHN J. KINGSTON, M. D., and
HAROLD K. FABEL, M. D.(From the Division of Pediatrics, Stanford University
Medical School, San Francisco.)

In a recent communication Bowditch and Leonard reported the favorable results obtained following the use of the X-ray in pertussis. They gave three to four treatments at intervals of two to three days, regulating the dosage according to the age of the patient, and in a small percentage of twenty-six cases a prompt cure was obtained—70 per cent were improved, while from 10 to 15 per cent were not relieved.

In the past few months all the cases of pertussis coming to the Stanford Children's Clinic were referred to the X-ray department. They were given from one to three exposures, at weekly intervals, of one-fourth the erythema dose—20 milliamperes minutes, target skin, distance 12 inches, $9\frac{3}{4}$ -inch spark gap $\frac{1}{4}$ mm. copper filter, over a large area of the chest, both front and back. Only undoubted cases of pertussis were included in this series, the diagnosis being made on both the history and character of the cough while under observation. In many of the cases white and differential blood counts were also obtained. Twenty-four patients were given this treatment and observed over a long enough period to allow us to draw some conclusions regarding its efficacy. The children ranged in age from seven months to thirteen years and were in all stages of the disease, the duration of the symptoms varying from three days to one month when treatment was instituted.

Four of the cases showed remarkable improvement after the initial treatment, while two of the children were not relieved even after three exposures. Ten of the remainder were markedly better after two treatments, the vomiting and, in most instances, the typical paroxysms stopping. The other eight showed a more gradual improvement, but were not considered cured after the last treatment. Perhaps the most constant effect of X-ray was the prompt cessation of vomiting, which occurred even in those cases where the whoop did not abate. Naturally the interpretation of the results is open to the criticism that the technic of the treatment required three weeks for completion, and the normal convalescence may have been overlooked in ascribing the improvement to the X-ray exposures. It is our belief, however, that the severity and length of the disease was not as marked in these cases as in others we have treated with vaccine and the usual sedatives and anti-spasmodics. Many of the patients have escaped the usual residual cough, and in none has it been troublesome.

We will not attempt, from this limited study, to draw any conclusions as to how the beneficial effects are obtained or why the results are not uniform. With our present knowledge we are unable to foretell which patient will be benefited. Apparently neither the age, blood count, duration, or

clinical severity of the disease are criteria as to its possible course under treatment.

A rough analysis of our figures shows that, in the whole group before treatment, there were 445-489 paroxysms of whooping daily; after one treatment the number was reduced to 218-245, or 49-50 per cent of the previous figure; after two treatments, to 65-74, or 15 per cent of the original; and after three treatments, to 9-10, or about 2 per cent of the original number. Whooping ceased in five cases after one treatment; in five cases, after two treatments; in seven cases, after three treatments; and in one case after four treatments. Three patients were still whooping after two treatments, and three, after three treatments, these being cases which failed to report again. The very sharp immediate reduction in frequency to half after one treatment would seem to indicate a definite response to the X-ray.

While the exact value, and limitations of the method demand further study, we feel that the definite improvement secured in many patients and the prompt and almost complete relief obtained in a few, constitute a positive gain in the treatment of a disease which is very rarely susceptible by other methods of more than temporary symptomatic relief. The fact that complete failure is met with in a certain proportion of cases should be explained in advance to the parents, but does not alter our belief that the X-ray treatment is at present the most promising therapeutic measure which we possess for pertussis. No ill effects from radiation have been encountered.

We gratefully acknowledge the co-operation of Drs. W. E. Chamberlain and Robert Newell of the X-ray department, without which the present study could not have been made.

Case No. 1—Age, 10 months; duration of disease, 1 month; W. B. C., 19,350; per cent lymphocytes, 20; number of paroxysms in 24 hours, 10-13; number of X-ray treatments, 2. After first treatment, 4-5 paroxysms daily; vomited with each spell; after second treatment no whooping or vomiting; cough 2-3 x daily; cured 3 weeks after first treatment.

Case No. 2—Age, 2 years; duration of disease, 2 weeks; number of paroxysms in 24 hours, 20-24; number of X-ray treatments, 3. Had 4 vaccine injections before X-ray treatment; seemed worse after first treatment; marked improvement after second; 2 paroxysms daily; no vomiting; did not report after third.

Case No. 3—Age, 5½ years; duration of disease, 3 weeks; W. B. C., 24,600; per cent lymphocytes, 57; number of paroxysms in 24 hours, 10-12; number of X-ray treatments, 1. Much better after first treatment; no vomiting or whoop; slight coughing spells 4-5 x daily; total duration less than 3 weeks.

Case No. 4—Age, 11 years; duration of disease, 5 days; W. B. C., 11,650; per cent lymphocytes, 33; number of paroxysms in 24 hours, 6; number of X-ray treatments, 3. Improved immediately after first treatment; no cough for 5 days after first treatment; then slight cough, but no paroxysms or vomiting; 3 weeks later no paroxysms or vomiting; coughing only once a day.

Case No. 5—Age, 1 year; duration of disease, 1 month; number of paroxysms in 24 hours, 4; number of X-ray treatments, 1. Immediate improvement after treatment; no vomiting or paroxysms; reported 3 weeks later, only one slight coughing spell in 24 hours.

Case No. 6—Age, 7 months; duration of disease,

*Presented to the Section on Pediatrics at the Fifty-second Annual Session of the California Medical Association, San Francisco, June, 1923.

2 weeks, number of paroxysms in 24 hours; 40-48; number of X-ray treatments, 2. After first treatment no paroxysms; vomiting 0-2; slight cough 4 x daily; after second treatment marked improvement; no cough or vomiting.

Case No. 7—Age, 2½ years; duration of disease, 3 weeks; W. B. C., 40,000; per cent lymphocytes, 72; number of paroxysms in 24 hours, 48; number of X-ray treatments, 3. No improvement till second treatment, then 9 paroxysms daily; vomiting 0-2; nose-bleed after third; seems worse after this treatment; 5 weeks after first treatment still coughing 8 x day.

Case No. 8—Age, 4 years; duration of disease, 2 weeks; number of paroxysms in 24 hours, 16; number of X-ray treatments, 2. No whoop after first treatment, but coughs 10-12 x daily; frequent vomiting; marked improvement after second treatment; no vomiting, practically no cough.

Case No. 9—Age, 2 years; duration of disease, 1 month; number of paroxysms in 24 hours, 24; number of X-ray treatments, 2. Better after first treatment; no vomiting; 8 paroxysms daily, much better after second treatment; practically no cough.

Case No. 10—Age, 4 years; duration of disease, 3 weeks; W. B. C., 13,400; per cent lymphocytes, 65; number of paroxysms in 24 hours, 24-30; number of X-ray treatments, 2. No vomiting after first treatment; 7-8 paroxysms daily; after second only 3 paroxysms daily.

Case No. 11—Age, 3½ years; duration of disease, 10 days; W. B. C., 10,200; per cent lymphocytes, 43; number of paroxysms in 24 hours, 24; number of X-ray treatments, 3. Slight improvement after first treatment; after second treatment no vomiting; paroxysms 3 x daily.

Case No. 12—Age, 5½ years; duration of disease, 1 month; W. B. C., 17,200; per cent lymphocytes, 49; number of paroxysms in 24 hours, 48; number of X-ray treatments, 2. Marked improvement after first treatment; vomiting 1-2; paroxysms 3-4; after second treatment no vomiting; paroxysms 3; cured after third.

Case No. 13—Age, 2 years; duration of disease, 1 week; W. B. C., 10,310; per cent lymphocytes, 71; number of paroxysms in 24 hours, 15-16; number of X-ray treatments, 3. No improvement after first treatment; after second, 8-10 paroxysms daily; condition same after third.

Case No. 14—Age, 4 years; duration of disease, 3 weeks; W. B. C., 9300; per cent lymphocytes, 67; number of paroxysms in 24 hours, 6-8; number of X-ray treatments, 3. No improvement after first treatment; after second, 1-2 paroxysms daily; cured after third.

Case No. 15—Age, 4 years; duration of disease, 3 days; W. B. C., 8800; per cent lymphocytes, 53; number of paroxysms in 24 hours, 5; number of X-ray treatments, 3. After first treatment, 5 paroxysms; no vomiting; after second treatment, 2 paroxysms; after third, no paroxysms; slight residual cough.

Case No. 16—Age, 13 years; duration of disease, 4 days; W. B. C., 15,410; per cent lymphocytes, 38; number of paroxysms in 24 hours, 21-26; number of X-ray treatments, 3. No improvement after first; after second, 6-8 paroxysms daily; no vomiting; cured after third.

Case No. 17—Age, 6 years; duration of disease, 6 weeks; number of paroxysms in 24 hours, 6-8; number of X-ray treatments, 3. Marked improvement after first; vomiting stopped; 4-5 paroxysms; after second, 3 paroxysms; cured after third.

Case No. 18—Age, 2 years; duration of disease,

2 weeks; W. B. C., 20,000; per cent lymphocytes, 57; number of paroxysms in 24 hours, 12-20; number of X-ray treatments, 3. Improved after first; no vomiting; paroxysms 8 daily, not as severe; after second, 2 paroxysms daily; none after third treatment.

Case No. 19—Age, 5 months; duration of disease, 2 weeks; number of paroxysms in 24 hours, 8-10; number of X-ray treatments, 3. No improvement after first treatment; vomiting 2 x after second; paroxysms 8-10; vomiting and paroxysms stopped after third.

Case No. 20—Age, 3½ years; duration of disease, 3 weeks; number of paroxysms in 24 hours, 20+; number of X-ray treatments, 3. Marked improvement after first; no vomiting; 7 paroxysms daily; no paroxysms of vomiting after second treatment.

Case No. 21—Age, 5 years; duration of disease, 5 weeks; number of paroxysms in 24 hours, 5; number of X-ray treatments, 3. 1-2 paroxysms after first treatment; started vomiting supper after first treatment; no vomiting after second; 1 paroxysm daily; cured after third.

Case No. 22—Age, 1½ years; duration of disease, 3 weeks; number of paroxysms in 24 hours 40; number of X-ray treatments, 3. Improved after first; 8-10 paroxysms; occasional vomiting; did not return after third.

Case No. 23—Age, 9 years; duration of disease, 3 weeks; W. B. C., 7950; per cent lymphocytes, 40; number of paroxysms in 24 hours, 24; number of X-ray treatments, 2. Improved after first; no vomiting; 7-9 paroxysms daily; cured after second treatment.

Case No. 24—Age, 5 years; duration of disease, 1 week; W. B. C., 10,000; per cent lymphocytes, 55; number of paroxysms in 24 hours, 8-10; number of X-ray treatments, 4. No improvement after first; X-ray; started vomiting after second; paroxysms 10; after third no vomiting; 1-2 paroxysms; only slight residual cough after fourth.

DISCUSSION

Dr. Clifford D. Sweet (440 Seventeenth Street, Oakland)—Our thanks are due Drs. Kingston and Faber for presenting their results to us. As they have pointed out, their series is too small to give these results their final value. Nevertheless, this method of treating whooping-cough is sufficiently successful to make further study of it desirable by all who have facilities available. The results of these further studies we will all await anxiously, hoping that a valuable method of relief for our patients has been found.

Reforming Fashionable—Have you ever stopped to think that everybody is a member of some society or other whose object is to reform somebody or other? According to a recent report there are over 1500 national "anti societies" in the United States, all working excitedly to prevent somebody from doing something they are supposed to want to do.

Reforming is very fashionable. Everybody is doing it. The rich are busy reforming the poor and the poor are passionately pleading with the rich to mend their ways. A man may violate the Volstead Act daily and gaily, and yet hold important office in a society the object of which is to enforce some other law. There are hundreds of organizations, employing thousands of people, campaigning loudly every day in the year for the enactment of some law or other. No sooner do we get the law enacted than we are importuned to organize to enforce it, and the day after the next we wake up to find that our neighbors have organized to repeal it!—*Pictorial Review*, June, 1923.

SYPHILIS OF THE BLADDER *

By ANDERS PETERSON, Los Angeles

In a careful review of the literature, Thompson found only eighty-four cases of syphilis of the bladder, and of these only fifty-eight were accepted as authentic.

Prior to the discovery of the Wassermann test and the use of the cystoscope, many cases of bladder lues undoubtedly were unrecognized, so that it is fair to assume that syphilis of the bladder occurs more frequently than the few reported cases indicate.

I wish to report two cases of syphilis of the bladder.

The first patient was a druggist, 45 years of age, whose previous history showed a gonorrheal infection nineteen years ago, but he denied any knowledge of a chancre. The main complaint was great bladder irritability and marked frequency of urination for the past eight months. Two weeks ago his symptoms became distinctly worse; he developed severe pains over the abdomen and passed clots of blood in the urine.

A cystoscopic examination, May 2, 1922, showed a small, irritable, diffusely inflamed bladder containing about three ounces of cloudy and foul-smelling urine.

On the right bladder wall, immediately above the right meatus, an edematous area, the size of a dollar, was seen, covered with calcareous deposits. Indigo carmine, given intravenously, appeared in strong color upon the left side within five minutes, and a strong blue could be seen coming from just below the incrustations upon the right side at the same time. The left ureter was catheterized, but I was unable to pass a catheter upon the right side.

Phenolsulphonephthalein appeared in five minutes on the left side with an output of 8 per cent in fifteen minutes. The bladder specimen showed 12 per cent of the dye.

Microscopic examination of the specimen from the left side was negative for pus. X-ray of the kidneys, ureters and bladder showed an irregular shadow over the right bladder area. The kidneys were negative for stone.

At the completion of this examination I was uncertain regarding the lesion in the bladder and debated in my mind if this could be a malignant tumor, tuberculosis, or a phosphatic cystitis. I confess that a luetic lesion was not at once considered. Following the cystoscopic examination, considerable blood was present in the urine, and three days following the examination the patient was unable to void on account of clots filling the bladder. Attempts at catheterization were unsuccessful. It became necessary to do a suprapubic cystotomy for drainage. By this time the laboratory work had been completed, which failed to demonstrate the tubercle bacilli in the urine, but showed a four-plus Wassermann reaction. At operation the bladder was found to be very small and firmly fixed deep in the pelvis, and it was with considerable difficulty that the dissection was made to place a tube in the bladder. Exploration of the bladder showed a large number of fragile

calcareous deposits over an ulcer in its right wall. These deposits were removed, but nothing further attempted to the ulcer itself. He was given small doses of neo salvarsan and mercurial rubs. The urine became free from blood and the fistula closed, so that on June 15 he went to his home and received anti-syphilitic treatment from his physician.

The suprapubic fistula reopened from time to time. The patient did not gain weight and was not able to go back to his work. He developed a fever and complained of pain in the left side of the chest. His physician made a diagnosis of active pulmonary tuberculosis. The man died August 15, 1922. No autopsy was held. During the entire time he tolerated anti-syphilitic remedies very badly, and although the urine became fairly clear, the bladder capacity remained small and the suprapubic wound opened from time to time.

The second patient was a woman 29 years of age, who consulted her physician on account of pain of two months' duration over the lower right abdomen. A careful physical examination, including an X-ray study of the gastro-intestinal tract, revealed no abnormalities, except a moderate amount of fluid in the abdomen and a few red blood cells in the urine. The X-ray showed an indefinite shadow in the right kidney area. The patient was referred to me because of the shadow over the right kidney, and on account of the presence of a few red blood cells in the urine. Cystoscopic examination showed upon the right wall of the bladder two ulcerated areas, from 6 to 8 mm. in diameter; one near, and the other about 2 cm. above the right meatus. The remaining bladder mucosa appeared normal. The left meatus was normal and the catheter passed easily up the ureter. Microscopic examination of the specimen collected from the left kidney was negative. No urine could be seen coming from the right side, nor could a catheter be passed up the ureter. Phenolsulphonephthalein appeared in five minutes with an output of 17 per cent upon the left side in fifteen minutes. The transvesical collection from the right side showed 9 per cent of phthalein. An X-ray of the kidneys, ureters and bladder was negative, and a pyelogram on the left side showed a normal kidney outline.

Again I could not decide from the cystoscopic picture positively the nature of the lesions in the bladder. The urine was examined for tubercle bacilli and none found. A blood Wassermann was reported as four-plus.

Considering the presence of fluid in the abdomen, the depressed function of the right kidney, the bladder picture, and the positive Wassermann test, the conclusion was reached that this patient had a syphilitic involvement of the liver, right kidney and bladder. She was placed upon anti-syphilitic treatment and had quite a severe reaction following two injections of salvarsan. Twenty-five intravenous injections of mercury were given. The patient was last seen October 10, 1922, reporting that she was feeling well. No evidence of ascites could be demonstrated.

The pathology of syphilis of the bladder has been studied post-mortem, through suprapubic cys-

*Presented to the Section on Urology at the Fifty-second Annual Session of the California Medical Association.

totomy and by means of the cystoscope. Thompson states that in the early course of the disease there is more or less congestion of the bladder mucosa, which may be likened to the diffuse eruption sometimes seen in the mouth and on the pharynx. Or there may be a distinct papular eruption, either with or without erosion or ulceration. The most frequent site of these lesions is around the ureteral orifices, usually around only one, but other portions of the bladder wall may be attacked. In the later stages of the disease the most frequent type of lesion is the ulcerating gumma. These ulcers are round, oval or irregular, and vary from one to two millimeters to several centimeters in diameter. They are usually of a grayish-yellow color with infiltrated edges and are sometimes covered by crustations. In some cases definite bleeding from the ulcers has been observed through the cystoscope and sometimes a blood clot can be seen attached to the ulcer.

Perforation and formation of a vesico-peritoneal fistula or a vesico-rectal fistula may occur. Sometimes there is only tumefaction without ulceration, the tumors varying in size from a small hazel nut to a walnut or larger. Papillomatous tumors have been observed, and even operated upon, on the assumption that they were benign papillomata. The microscopic picture of lesions of syphilis of the bladder has not been studied very thoroughly. There is no doubt that it is the same as found in similar lesions elsewhere and, briefly, consists of an infiltration of lymphocytes and plasma cells, proliferation of the fixed cells, and more or less endarteritis. The Wassermann test has proved very reliable in vesical lesions, and can be expected to be found positive in practically 100 per cent of all cases of bladder syphilis.

When ulcers, papillomas and solid tumors of the bladder are found upon cystoscopic examination, one cannot be positive regarding the nature of the lesions from the cystoscopic picture alone. A Wassermann test should, therefore, be done whenever the above mentioned lesions are found. Should the test show a positive reaction, a course of specific treatment is indicated prior to any surgical intervention.

DISCUSSION

Miley B. Wesson, M. D. (Flood Building, San Francisco)—This paper is most interesting and offers additional evidence for the necessity of routine Wassermann tests in all cases of ulcers and tumors. Judging from the literature, syphilis of the bladder is very rare, but if every syphilitic was cystoscoped during the exanthematous stage it would undoubtedly be found that the mucous membrane of the bladder was also involved, even though there were no vesical symptoms. The bladder lesions vary from small mucous patches or ulcerated papules with elevated borders to tumors simulating a median lobe hypertrophy of the prostate. The most confusing tumors are the syphilitic papillomas, which can not be cystoscopically distinguished from benign papillomas. The first laboratory diagnosis of syphilis of the bladder was made only six years ago; some half-inch papillomas that had been removed suprapubically were reported as syphilitic condyloma, and at the same time the blood Wassermann was found to be strongly positive. The patient gave a history of

a chancroid two years before, and two blood tests, taken in the Navy, had been negative.

There is nothing characteristic as to the symptoms or cystoscopic picture in bladder syphilis. The diagnosis rests upon the history and the presence or absence of other manifestations of syphilis, including the Wassermann test. All cases of hematuria and pollakiuria should be looked upon with suspicion until syphilis is ruled out. Dr. Peterson's paper emphasizes Sir William Osler's statement that the man who knew syphilis in all of its manifestations knew all of medicine.

(412 Brockman Building.)

Some Recent Facts on Blood Pressure—Under this title the Metropolitan Life Insurance Company says: "Facts which have recently come to hand through a joint study by the Life Extension Institute and the Metropolitan Life Insurance Company indicate that we may have to revise our ideas on the causes of abnormal blood pressure. Heretofore, the literature has emphasized the importance of such items as overweight, high protein diet, the excessive use of tobacco, the existence of focal infections in the tonsils and in the dental structures. All of these, either singly or in combination, have been associated with the existence of abnormal blood pressures, either high or low. From the data gathered in the examination of nearly 17,000 policyholders of the Metropolitan Life Insurance Company by the Life Extension Institute in 1921, it appears that of the several factors above mentioned, only overweight is consistently accompanied by a markedly higher percentage of high blood pressure. The other conditions are not clear-cut causative factors.

"Among white males who partook of too high protein diet, blood pressures 20 m.m. Hg. and more, above the average for age were noted in 7.3 per cent of the cases, and among all other persons examined and used as a control, that is, persons who did not partake of too high protein diets, the proportion of hypertension cases was 7.4 per cent! High blood pressure was recorded in 6.6 per cent of the cases where 'excessive use of tobacco' was observed, as compared with 7.8 per cent among those not using tobacco to excess. Suspected focal infection in the tonsils showed 7.4 per cent of the cases with hypertension, as compared with 7.3 per cent among white males showing no enlarged septic or buried tonsils. There were 6904 of these policyholders who had 'heavy dentistry,' that is to say, they had a large amount of bridgework, crowns, caps and other artificial dentures under which so many blind abscesses, areas of infection, etc., are found on X-ray. Presumably, these cases were all in the class which has received so much attention from dental pathologists recently. Yet, these policyholders showed no more important departures in arterial tension than did the group which had no 'heavy dentistry.'

"The findings on low blood pressure are of interest also. Over-weights, high-protein feeders and persons with enlarged, septic or buried tonsils, had lower percentages of low blood pressure than did the control groups not showing these impairments. Low blood pressure was only slightly, perhaps insignificantly, pronounced among excessive users of tobacco and among persons having suspected dental infection.

"It is not entirely clear just what these figures mean in the light of the usually accepted ideas on causes of abnormal arterial tension. The figures simply suggest that certain etiologic factors described in general terms by the medical profession and familiar as such to the lay public, have no gross casual relationship either to high or low blood pressure."

FATAL AIR EMBOLISM AFTER PUNCTURE MAXILLARY ANTRUM—AUTOPSY

By J. A. BACHER, M. D.
(From the Department of Surgery, Stanford University Medical School.)

X-ray of the maxillary antrum, followed by lavage through a straight trocar of two millimeters, outside diameter, placed through the inferior meatal wall, has for several years been our routine in the examination of suspected chronic sinusitis cases. We have done this several thousand times in the past six years, 1191 times in the past two and a half years. We have very seldom blown air through the trocar before liquid, but we have not absolutely forbidden it. We have considered this an easy and safe procedure, and one of the first things to allow our internes to actually do after they have completed the technique of examinations.

A case of sudden death, shown by autopsy to have been caused by air embolism, has caused us to modify our technique somewhat.

Case Report—Male, age 40. Catarrh and impairment of nasal breathing for years; acute rhinitis five or six times a year; much anterior nasal discharge; tonsillitis once a year; hearing impaired in both ears, four years; much tinnitus; no pain or discharge in ears. Examination showed the nasal septum irregular on the right, turbinates enlarged, much mucopurulent discharge, space poor; left naris about the same; tonsils moderate size, wide crypts, purulent debris in crypts; nasopharynx clear; vocal cords and arytenoids, normal motility and appearance; both membranae tympani retracted, fibrous, fair light reflexes; watch heard in right ear 12/36, in left 18/36. X-ray showed thickened lining membrane both maxillary antra. Straight trocar placed through right inferior meatal wall into antrum by interne. Air forced through trocar. Collapse.

The patient was stiffened out in the examination chair when I reached him. The trocar had been withdrawn. My first thought was epilepsy; but when he was at once laid out on the floor, we noted that, though his lower limbs were spastic, the upper ones, neck and jaws, were relaxed, pupils dilated, pulse not perceptible. Carried across the room to treatment table. Adrenalin, caffeine sodium benzoate and strychnine sulphate hypodermically at intervals. Heart massaged for fifteen minutes. Artificial respiration for half an hour. No heart beat with stethoscope.

Autopsy—Autopsy by Dr. William Ophüls showed death to have been due to air embolism, the right ventricle and conus of pulmonary artery being filled with a foam of air and blood.

Sir St. Clair Thompson, at the meeting of the Section of Laryngology, Royal Society of Medicine, March 2, 1923, said he had been taught to blow air through the cannula, and he had never seen an accident from the procedure. He said that it would be important to settle whether air really was responsible.

Two cases have been reported where autopsy has shown death to have been due to air embolism, one by Bowen in 1913, and one by Neugebauer in 1917. Both of these cases are cited by Grove in 1922 in his detailed account of mishaps in puncture of the antrum.

We now force the trocar, without any rubber attachment, through the inferior meatal wall, apply

suction to the trocar with a glass syringe to be sure it is not in a vein, attach a piece of rubber tubing which has a metal modifier that fits the trocar tied to it, and force the liquid through with a metal syringe. No air should be blown through before the liquid. After using the fluid, a couple of syringefuls of air are used to partially clear the antrum of fluid.

This makes a safe procedure and we shall continue to use it in our work.

Responsibilities of the Press—The gullibility of man is limited only by the scope of his imagination, although it is in some measure modified by the degree of intelligence which he possesses. "In some measure" we say advisedly, for we know that in fields which lie outside his exact knowledge even the most intelligent of men will often hold reason in abeyance and believe that which he wishes to believe, or that which appeals to his fancy, his imagination, or that innate love of the mysterious which lies in all of us. Thus we have the examples of Bishop Berkeley exploiting his tar water, George Washington (so it is said) purchasing from Elisha Perkins a pair of metallic tractors for family use, and in our own more enlightened day countless numbers seeking health through the many irregular methods that we are all aware of.

As each extravagant claim and each unwarranted belief is promulgated, however, there is always that large number of reasoning individuals who, either through natural wisdom or exact knowledge, know that these claims and beliefs are unsubstantial and faulty. It is through these persons that the acceptance or rejection of unusual ideas should come, and it is by them that the minds of the people should be directed into the proper channels when occasions of doubt, or bewilderment, or spurious belief are likely to arise.

It is inconceivable to believe that our daily press should not have men of this caliber intimately concerned with the directing of its policies; it is also inconceivable to believe that our press, for the sake of presenting the spectacular to its readers, or for more baldly commercial reasons, should print as news or advertisement statements, in the guise of fact, which may be detrimental to the public interest. Inconceivable or otherwise, we must acknowledge that this is done.

Editorial policies and news and advertisements we find are conveniently separate, for the advertising pages of a newspaper which, editorially, professes great interest in the public welfare, will flaunt proprietary gland preparations before our eyes, and in the news section we will find considerable concern exercised lest Lord Carnarvon's insect bite might be the imperial punishment of a long dead Pharaoh, although, in another section of the same issue, we may read a denial of this possibility. "Let not thy right hand know what thy left hand doeth" might almost be adopted as a motto by many publications.

There is great power for harm in such statements and advertisements, and we have seen too much of this loose thinking and unscrupulous advertising lately. The newspaper is the most powerful instrument in the world for shaping public opinion, and its responsibilities are too great to be taken lightly. Quotations concerning the power of the pen are hackneyed, but it is very near the truth to say that high-minded and public-conscientious editorial staffs are more valuable than college faculties.—Editorial, Boston Medical and Surgical Journal, April 19, 1923.

EDITORIALS

INDEMNITY DEFENSE FUND COVERAGE AND PROTECTION STOPS NOVEMBER 30, 1923

The Council, at an adjourned meeting held at San Francisco, September 22, 1923, unanimously adopted the following preamble and resolutions:

Whereas, The House of Delegates of the California Medical Association (formerly called the Medical Society of the State of California) at its last regular meeting held at San Francisco, Cal., June 23, 1923, by resolution unanimously adopted, resolved that the Indemnity Defense Fund be discontinued as a society undertaking at such time and upon such notice as the Council should deem necessary for the best protection of its members; now therefore, pursuant thereto and to the authority vested in the Council by the administration regulations and coverage rules of said Indemnity Defense Fund, it is hereby unanimously

Resolved, That the benefit, protection, coverage and indemnity of the Indemnity Defense Fund shall not nor shall any part thereof extend to or cover any malpractice claim or case or suit or judgment, as defined by said regulations and rules, against any member of said fund, arising out of professional services or acts done by or on behalf of such member on or after December 1, 1923; and no member of said fund shall have or be entitled to or receive any benefit or protection or coverage or indemnity from said fund or any part thereof as to any such claim or case or suit or judgment against him so arising out of professional services rendered or acts done by him or on his behalf on or after December 1, 1923; and said administration regulations and coverage rules are hereby amended accordingly; and be it further hereby

Resolved, That a copy of this resolution be forthwith sent to the trustees of the Indemnity Defense Fund and to each member of said fund at his address as shown by the Association's books and records by registered mail; and that the secretary of the Association in such registered letter direct the attention of each member to the necessity of securing a physician's indemnity policy with some insurance carrier issued to him and effective not later than November 30, 1923; and that this resolution be published in the November issue of the Journal, and, if possible, the October issue thereof.

THE ILLNESS OF THE EDITOR OF THE JOURNAL

Early in September Dr. Musgrave was taken sick with lobar pneumonia, and from the very first he was in an extremely critical condition. The base of the left lung and later the greater portion of the right lung was involved in the inflammatory process.

Due to his overworked condition and especially to the exhausting activities incident to the supervision of the recent meeting of the A. M. A., Dr. Musgrave was in a state of lowered resistance. His heart fibrillated badly and the toxemia was extreme. As a complication he developed a right-

sided empyema. This was drained and a stormy period intervened, with a bad prognosis.

At present writing—three weeks from the inception of his malady—the situation is clearing and there is every reason to believe that he will recover. Necessarily, however, he must be exempt from the more arduous duties of his office for some time to come.

AN INNOVATION IN MEDICAL LITERATURE

With this issue, the CALIFORNIA STATE JOURNAL OF MEDICINE introduces an experimental innovation, so far as we know, in medical literature: A number of articles are discussed by men interested in the field covered by the authors. This discussion is not the usual extemporaneous remarks of a man who has heard the paper read at a medical meeting, but is the mature, thoughtfully prepared comments of a man who has had the manuscript in front of him, has studied it and prepared what he has to say without haste.

The first step in this movement was taken recently, and the editor of the Journal is much pleased at the spirit of co-operation and splendid letters of commendation of the movement already received. Frankly, we do not know what the end result of this movement will be. In any event, we are going to give it a fair trial.

Up to the present time these manuscripts have been sent to different members in different parts of the state without any very definite system. If the movement meets the endorsement of our readers and is to fulfill the mission we hope that it may fulfill, it must be supported by a large number of contributors representing general practitioners and all the various legitimate specialists in the field of medicine. To that end, the comment and suggestion of members of the State Association is invited, not only as to approval or disapproval of the continuation of the policy, but more particularly and specifically we would like to have interested members send their names and addresses and the field in which they are interested to the Journal, so that they may be included among those who will be invited to discuss papers from time to time.

ANOTHER HOSPITAL "SURVEY"

The daily press reports that, at the request of some of those interested in Community Chest promotion, another "survey" of the health and hospital situation in San Francisco was made recently by Haven Emerson of New York. We do not know who is paying for this last "survey," but we do know that all the facts of any practical value brought out by the "survey" and many more of greater value are already matters of record and were and are available to responsible Community Chest authorities without price.

Some of the statements made by the surveyor are not facts, and some of his recommendations looking toward the socialization of medicine deserve notice.

In his talk to hospital trustees and superintendents, Emerson criticized San Francisco for not having five hospital beds per thousand of population. He apparently did not take the trouble to read

published reports, to say nothing of examining unpublished records of the medical profession, or he would have found that we already have more than the five hospital beds per thousand of population.

Emerson's criticism to the effect that the hospitals were using "faulty" business methods in reporting to the Community Chest was resented by some of those present. Methods of hospital accounting are not what they should be anywhere. There is no one system universally employed, and certainly the obsolete methods indicated in the questionnaires sent out in this "survey" should not and will not be adopted by progressive hospitals of California.

Most of the representative hospitals of the state have been gradually working toward a uniform method of accounting for several years. This subject is discussed every year at the hospital conference held under the auspices of the League for the Conservation of Public Health, and the subject receives constant attention from the Hospital Betterment Bureau of the League. The certificate of merit was awarded the League for the Conservation of Public Health for its scientific exhibit at the recent A. M. A. Convention. Among the features of that exhibit was a model hospital accounting system, which is being followed, or constantly more closely approximated by hospitals all over California. The hospital betterment work of the League has had the repeated endorsement of the hospitals of the state in annual conference. It has the endorsement of the California Medical Association, and hospital accounting forms one of the essential factors of its program.

Some of the hospitals whose accounting methods are reported to have been criticized by someone in the Community Chest are following the approved program for the state so successfully that they are used for training stations for students of hospital accounting.

A most amazing recommendation attributed to Emerson has been brought to our attention by an avalanche of letters, telephone calls, and personal visits from hospital people. He is reported to have recommended that the San Francisco County Hospital be opened to "middle class" pay patients.

This, of course, is a form of "State Medicine" or "socialized medicine" that will require more than a "survey" to impose upon the community. Social Health Insurance was once rejected by the people of California at the polls, and if it comes up again the same forces will be prepared to meet it.

A large group of members of the San Francisco County Medical Society gladly give freely of their time in free service to the patients of this great city hospital. They do this because these patients are unable to meet the expenses of sickness. The hospital also furnishes care free to citizens who are unable to pay; this at an unknown cost in taxes to the people of the county. The cost is unknown because of an incomplete and inadequate accounting system of the kind Emerson apparently would like to see in other hospitals. With an adequate accounting system it will be found that the cost to those who pay the bills is fully as much in the San Francisco County Hospital or any other govern-

ment hospital as it is in those under private management.

Most, if not all the hospitals, so unsparingly and unfairly criticized by Emerson are bearing community burdens by taking care of patients who pay less than cost and many who pay nothing at all. It is natural that the trustees and administrators of these hospitals should resent implications of incompetency or worse.

"Middle class" is an indefinite term often combined with platitudinous phrases, which conceals what is meant. What is your definition for "middle class"? In political propaganda that "expresses great human interest," it is often used as a synonym for "the peepul." It is impressively ambiguous. Various "economists" rate "middle class" as people receiving compensation anywhere between \$1500 and \$5000 a year. Some place restrictions and conditions of one sort or another besides the money income. Physicians themselves and those engaged in the administrative and technical work of hospitals are "middle class" people if judged by average income.

As another evidence that Emerson reflects his peculiar views for the socialization of medicine in his "survey," we find that he recommends the establishment of "evening pay clinics" for those who work during the day and are "unable" to pay.

Clinics of this kind were first advocated during the time when a day's work was twelve or more hours. Physicians' services are available in their offices and elsewhere at hours convenient to all the people who work upon any of the usual eight-hour shifts that constitute a day's work in California. Furthermore, there is an educated licensed physician in San Francisco to each four hundred people, a physician's office for each six hundred people, and a drug store for each four physicians. Under a resolution of the California Medical Association, each physician's office is a "Health Center," where people may pay whatever proportion of the physician's regular fee they can afford to pay. Finally, a considerable number of evening clinics have been started by various influences at various times, and all have closed their doors for lack of patients.

Emerson's criticism of the physicians of San Francisco in his statement that school children are not adequately examined is also challenged. If Emerson had criticized that group of non-medically educated people who are making diagnosis and otherwise interpreting health conditions of school children by the use of scales, measuring-rods and a kind of a printed key of averages, his statement would be generally commended by those who know. It is always much safer to criticize physicians, because they will stand more before making their resentment manifest.

There are other fundamental defects in Emerson's superficial "survey," which will receive our attention at a later date, providing anyone takes the "survey" seriously and attempts to act upon it.

PERIODIC MEDICAL EXAMINATIONS

Practically every normally thinking person recognizes the value of periodic medical examinations. The query was recently put to a large group of miscellaneous people met on the street and in pub-

lie places. Except for the few who hold curious ideas about disease, they all recognized the value of such an examination.

Such a survey brings out some interesting facts: The most important is, that a large percentage of people do not know how to proceed to get the examination. So many organizations have so thoroughly propagandized the public with so many theories that an amazing proportion of them no longer know what to think. They have been taught to consult this organization for this and another one for that, until they seem to think that physicians' offices are no longer open to them unless they apply through some organization.

Then, too, many people realize that periodic medical examinations are rapidly developing into a large private business. There is no reason why financial organizations should not develop this field, as they are doing in rapidly increasing numbers. After all, it is a kind of insurance comparable to other forms of life insurance. *However*, a surprising number of people, seeing the extensive advertising of life-extension institutes, who are conducting a reputable business venture in an ethical manner, are likely to have an unexpected query regarding the altruism of voluntary agencies promoting periodic examinations purely because of their intense love of their fellow-man. Some people express a normal curiosity as to what the relations are between some of these welfare movements and private business.

Another class of people wonder whether a periodic examination consists in filling out one or another of a variety of questionnaires provided by all sorts of societies, or whether it is a matter of scales, measuring-rods, and a table which interprets measurements in terms of health.

Most of these movements, except the business organizations and physicians, are quite busy trying to sell an idea long since sold, and they fail to sell a method of procedure because they cannot agree upon one. Most important of all, they fail to recommend the only procedure that can succeed or live, and that is, that these examinations can be made only by educated physicians, and that any educated physician can, and is ready to, make such examinations at any time.

Hundreds of physicians in California and elsewhere are making these examinations daily for life extension institutes under one name or another, and are being compensated for their work. There is a lot of propaganda being put out by some of the "uplift" organizations to the effect that only certain specially qualified physicians of their own choice are competent to make periodic medical examinations. Some of this propaganda is carried forward by certain physicians. They are usually of the kind who criticize their colleagues in their home towns, and some of them travel and spend a lot of time proposing to educate their fellow physicians. As a matter of fact, any educated physician can make these examinations, and they cannot be made by anyone else.

It is not love of humanity that prevents some organizations from acknowledging this fact and

urging their followers to utilize medical methods for medical results.

The American Medical Association has prepared the way for physicians to emphasize the value of periodic examinations and to conduct them in their own offices. The House of Delegates passed the following resolution on the subject in 1922:

"Whereas, The need and value of periodic medical examination of persons supposedly in health are increasingly appreciated by the public, it is recommended by the Council on Health and Public Instruction that the House of Delegates authorize the council to prepare suitable forms for such examinations, and to publish them in the journal of the American Medical Association; and that the county medical societies be encouraged to make public declaration that their members are prepared and ready to conduct such examinations, it being understood that the indigent only shall be examined free of charge, and that all others are expected to pay for such examinations."

Suggested forms and methods of procedure have been prepared by the Association, and physicians can secure these at a nominal expense by writing to the secretary of the A. M. A., 535 North Dearborn street, Chicago.

ATTENTION, MEDICAL OFFICERS!

All medical men who desire appointment as officers in the Officers Reserve Corps are now eligible, subject to the usual physical examination. Each appointment is based upon former rank and record of service.

As the country needs medical men to complete its national defense plan, there should be a prompt and general response from the members of the Medical Association of California. After November 11, 1923, appointments upon the present basis will be discontinued. After that date you will waive your right to an appointment based upon your former record of service.

Colonel Charles W. Decker, a member of the Los Angeles County Medical Society and special committeeman of the Medical Organization Association of the Army of the United States, has received a telegram from Surgeon-General Ireland, endorsing the appeal to former medical officers and urging all of them to join the colors again. The surgeon-general has stated in his report that the Medical Department was better organized and better prepared for the strenuous service of the World War than any other department.

The organization of Medical Officers Reserve Corps will insure better service whenever our country calls or emergency demands. A commission in the Medical Reserve will not demand a sacrifice, as it will not take the busy physician away from his practice. It will, however, help the Government to carry out the plans authorized by Congressional Act for defense in time of war.

Your application, accompanied by the report of your physical examination, should be forwarded to Lieutenant-Colonel H. R. Richmond, Liaison Officer, 625 Detweiler Building, Los Angeles, California. Act promptly; after November 11, 1923, it will be too late.

1924 MEETING OF CALIFORNIA MEDICAL ASSOCIATION

The 1924 meeting of the California Medical Association will be held at the Los Angeles Biltmore, Fifth and Olive streets, Los Angeles, commencing Tuesday, May 13, 1924.

The Association is assured by the committee on arrangements, Drs. Kiger, McArthur and Shoemaker, that the Los Angeles Biltmore can accommodate both the general session and the fifteen special sections.

CORRECTION

Through an error on the part of the Journal, the name of Dr. Richard O. Schofield, Colfax, was appended to an advertisement in the September issue on page 46. The name of Dr. Schofield has no connection with this advertisement and should not have thus appeared.

HOSPITAL CONFERENCE PROGRAM

The third annual Conference of the Hospitals of California, under the auspices of the League for the Conservation of Public Health, will be held at the Fairmont Hotel, San Francisco, October 18, 19, and 20. The program presents subjects of vital importance to everyone interested in hospital betterment.

PARTIAL PROGRAM

FIRST MEETING

Thursday, October 18, 10 a. m.

Fairmont Hotel, San Francisco

Dudley Smith, M. D., President of the League for the Conservation of Public Health, Presiding.

1. "The Duties and Responsibilities of the A. M. A. in Hospital Betterment"—Ray Lyman Wilbur, M. D., President American Medical Association.
2. "The California Medical Association and Hospital Betterment"—T. C. Edwards, M. D., President California Medical Association.
3. "Hospitals as Educational Agencies"—H. S. Pritchett, Ph. D., President Carnegie Foundation for Advancement of Teaching.
4. "Hospital Hospitality"—The Rt. Rev. W. F. Nichols, D. D., Bishop of California.
5. "Hospital Betterment in California"—W. T. McArthur, M. D., Los Angeles.

SECOND MEETING

Thursday, October 18, 2 to 5 p. m.

Fairmont Hotel, San Francisco

Percy T. Magan, M. D., Vice-Chairman, Presiding.

Subject—"How May Hospital Care Be Furnished Most Economically, Adequately and Efficiently to Those Who Cannot Afford to Pay the Full Cost of Such Service?"

Opening—George B. Somers, M. D., Lane and Stanford University Hospitals, San Francisco.

Discussants—L. S. Schmitt, M. D., University of California Hospital; D. H. Trowbridge, M. D., Burnett Sanitarium, Fresno; W. B. Coffey, M. D., St. Francis Hospital, San Francisco; A. S. Keenan, M. D., Mary's Help Hospital; S. H. Buteau, M. D., Samuel Merritt Hospital; Mrs. Horatio Walker Jr., The Hospital of the Good Samaritan, Los Angeles; Mr. Luther G. Reynolds, Methodist Hospital of Southern California; Sister Veronica, St. Mary's

Hospital; Mrs. Henry Kiersted, Children's Hospital; Charles G. Levison, M. D., Mt. Zion Hospital; George H. Juilly, M. D., French Hospital; H. H. Johnson, M. D., St. Luke's Hospital; Mrs. J. P. H. Dunn, Fabiola Hospital, Oakland; D. A. Beattie, M. D., San Jose Hospital; J. W. James, M. D., Sutter Hospital, Sacramento; Emma McKay, M. D., Hazel Hawkins Memorial Hospital, Hollister.

Subject—"Group Nursing."

Opening—Mary S. Power, University of California Hospital, San Francisco.

Discussants—Miss Alice G. Henninger, Seaside Hospital, Long Beach, Cal.; Miss Helena Rice, St. Helena Sanitarium, California; Miss Grace Kennedy, St. Luke's Hospital, San Francisco.

Question and Answer Conference—The method of answering practical questions on hospital problems so effectively used at two previous conferences will be followed this year.

THIRD MEETING

Friday, October 19, 9 a. m. to 12 noon

John H. Graves, M. D., Presiding.

Subject—"What is the Best Method of Articulating the Hospital with Its Various Legitimate Contacts? Pathology and Clinical Laboratories, Radiology, Public Health Department, Nursing, Dental Department, etc."

Opening—William Ophuls, M. D., Dean Stanford University Medical College; Walter V. Brem, M. D., Los Angeles; H. E. Ruggles, M. D., San Francisco; William C. Hassler, M. D., Health Officer, San Francisco; Dr. Guy S. Millberry, Dean Dental College, U. C.; Miss Anna C. Jamme, Director State Bureau of Registration of Nurses.

Discussants—Mr. J. B. Levison, Mt. Zion Hospital; H. P. Wilson, M. D., Murphy Memorial Hospital, Whittier; N. N. Wood, M. D., Los Angeles County Hospital; Sister Mary Ann, St. Vincent's Hospital, Los Angeles; James B. Cutter, M. D., Children's Hospital, San Francisco; R. G. Brodrick, M. D., Alameda County Hospital; Herbert O. Collins, M. D., Director-General Hospital of Fresno County; A. S. Musante, M. D., St. Joseph's Hospital.

Subject—"Medical Social Service in Its Relation to the Patient and Hospital."

Opening—Miss N. F. Cummings, Lane-Stanford Hospital, San Francisco.

Discussants—Miss Katherine Felton, Associated Charities, San Francisco; Miss Josephine Abrahams, Mt. Zion Hospital, San Francisco.

FOURTH MEETING

Friday, October 19, 2 to 5 p. m.

Subject—"Economic Value of Nursing School to the Hospital."

Opening—Sister Paschal, St. Mary's Hospital, San Francisco.

Discussants—Miss Martha E. Borg, White Memorial Hospital, Los Angeles; Miss Laura L. Mitchell, Pacific Hospital, Los Angeles; Miss Kathleen Fores, Children's Hospital, San Francisco.

Subject—"Hospital Administration, Including Methods of Accounting, Reports, Methods of Admission, Classification and Discharge of Patients."

Opening—Robert G. Sproul, Comptroller University of California.

Discussants—G. W. Curtis, Santa Barbara; Mr. John J. O'Connor, Manager St. Francis Hospital; E. S. Erwin, Stanford University; Mr. H. S. Hudd, Samuel Merritt Hospital; Mr. A. E. Roth, Stanford

University; N. T. Enloe, M. D., Chico; O. G. Wicherski, M. D., San Diego County Hospital; Miss Florence Klaeser, White Hospital, Sacramento; C. Van Zvalenberg, M. D., Riverside Community Hospital.

As the narcotic problem is largely a medical and hospital problem, the fifth meeting of the Hospital Conference will be devoted to discussing, "What Should California Do to Improve the Narcotic Situation in Our State?" Among the speakers will be Curtis D. Wilbur, Chief Justice of the Supreme Court of California; W. T. Williamson, M. D., President Mountain View Sanitarium, Portland, Oregon; James Rolph, Jr., Mayor of San Francisco; Mrs. D. E. F. Easton, President City Federation of Women's Clubs; Louise B. Deal, M. D., Chairman Anti-Narcotic Committee.

Groups interested in Hospital Staffs and Staff Organizations; Ambulatory Patients' Departments and Services; Laboratory Technicians; Physiotherapists; Roentgenologists; Library and Clinical Record Technicians; Organization Management; Hospital Accounting; Dietitians; Management Municipal, County and State Hospitals, will discuss special phases of their particular hospital work at Group Luncheons on Thursday, October 18, and Friday, October 19.

A splendid program will be presented by the State League of Nursing Education at a luncheon at the Fairmont Hotel, Friday, October 19, to which all the Hospital Conference delegates are invited. "Significant Progress in Nursing Education" will be reviewed by Miss D. Dean Urch, Superintendent of Nurses, San Francisco Hospital; "The Hospital's Responsibility for the Welfare of Student Nurses—Physical, Dietary, Recreational, Social," will be discussed by:

Ethel Owen, M. D., Lane-Stanford Hospital, San Francisco; Miss Ethel Thompson, Dietitian, San Francisco Hospital, San Francisco; Miss Ruth Heyneman, Recreational Director, City Playgrounds, San Francisco; Miss Lucy W. Stebbins, Dean of Women, University of California, Berkeley.

Miss Janet E. Cameron, superintendent of nurses, Alameda County Hospital, will preside, and Miss Anna C. Jamme, president of the State League of Nursing Education, will deliver the opening address at this group luncheon.

Saturday morning, October 20, will be devoted to visiting the following hospitals, which will have representatives ready to welcome delegates and guests and to show all departments as they operate: Lane and Stanford University Hospitals; University of California Hospital, San Francisco; San Francisco Hospital; Franklin Hospital; St. Mary's Hospital; Children's Hospital; St. Luke's Hospital; Southern Pacific General Hospital; Mount Zion Hospital; French Hospital; Hahnemann Hospital; St. Francis Hospital; Mary's Help Hospital; St. Joseph's Hospital; Alameda County Hospital, San Leandro; Fabiola Hospital, Oakland; Providence Hospital, Oakland; Livermore Sanitarium, Livermore; The Samuel Merritt Hospital, Oakland.

Charles D. McGettigan, M. D., chairman of the executive committee, League for the Conservation of Public Health, will preside at the final

conference meeting, October 20, at which the reports of all special committees will be heard and the business before the conference will be disposed of.

Epidemiology of Colds in Infants—Five hundred cases of colds were studied by Walter Fritz Winholt and Edwin Oakes Jordan, Chicago (Journal A. M. A., July 28, 1923). There was a distinct history of a cold in some member of the family in 290 of the 500 families in which the baby had a cold, but in only 180 of the families to which the normal babies of the control series belonged. That is, 58 per cent of the babies having colds at the time they were brought to the infant welfare stations had presumably been more or less in contact with other cases of cold in their respective families, while only 36 per cent of those without colds had been subject to similar contact. Figures given seem to indicate that in families in which there are babies with colds there is much more likely to be a history of cold in the mother than in families in which the babies are free from colds, but that the occurrence of a cold in the father is not manifestly related to a cold in the baby. In families in which members other than the mother or father, presumably in most cases other children, have colds, babies with colds are somewhat more numerous than babies without colds. The relatively close and prolonged association of mother and baby may account for the observed differences. So far as these facts go, they distinctly favor the view that at least some types of common cold are due to contact infection. The incubation period of colds is probably very short. Nearly all the babies' colds which were contracted after exposure within the family showed symptoms before the preceding patient's cold had disappeared. Coincident ailments, indicating lowered resistance, especially those of deranged metabolism, were much more common in babies with colds than in those without colds.

Socializing Medicine—About a year ago we called attention to the effort on the part of the University of Michigan to socialize medicine. Subsequently the medical profession of Michigan took occasion to question the propriety of putting into operation some of the socialistic schemes proposed and concerning which we had offered adverse comments, with the result that the medical leaders in the university disclaimed any intention of adopting any plans that could in any way be considered as socialistic or communistic in character. However, they never have explained away the plan for creating community clinics in the various populous sections of Michigan, such clinics to be under the supervision of the university (State controlled), nor have they been able to explain the reasons for requesting the building of an enormous hospital in the small city of Ann Arbor, the home of the university, with facilities for caring for probably twenty times more patients than can be used for purely teaching purposes. Before the medical profession of Michigan really was awake to the dangers that threatened, a large appropriation was secured and the hospital was started. The hospital never has been completed, for in addition to the very large amount of money that already has been put into it a still larger sum is required to complete it, and today the large and incomplete buildings stand as an expensive monument to the effort on the part of the medical department of the University of Michigan to create a feature that undoubtedly eventually must become a feature of so-called State medicine.—Editorial, The Journal of the Indiana State Medical Association, July, 1923.

COUNTY NEWS

FRESNO COUNTY

Fresno County Medical Society (reported by John D. Morgan, secretary)—The regular meeting of Fresno County Medical Society was held September 4, 1923, at the General Hospital of Fresno County. There were thirty-five present.

John Rehisch of San Francisco read a paper on "Deep Therapy Radiations." F. H. Rodenbaugh of San Francisco spoke on "Recent Advances by X-ray." Discussed by W. G. Milholland and Frances B. Sheldon.

Dr. O. B. Doyle, a member of Fresno County Medical Society, passed away August 28, 1923, and the following resolution was passed upon his death:

Whereas, Divine Providence has deemed it wise to remove from our midst Dr. O. B. Doyle; now, therefore, be it

Resolved, That in the death of Dr. Doyle the medical profession has lost a valuable representative, the Fresno County Medical Society a valuable member, and each and every physician a good friend; and be it further

Resolved, That we extend to the bereaved family our deepest sympathy; it is also further

Resolved, That a copy of these resolutions be placed upon the minutes of the Fresno County Medical Society, a copy sent to the family, and a copy printed in appropriate form to be displayed in the office of each member of Fresno County Medical Society for one month as a token of our respect and esteem.

Fresno County Medical Society,

J. L. Maupin,

C. D. Collins,

D. H. Trowbridge.

LOS ANGELES COUNTY

Los Angeles County Medical Association held no regular meetings in September, but will resume its meetings in October.

Dedication of St. Mary's Hospital, Long Beach—Approximately 3000 people attended the formal dedication of St. Mary's Hospital at Tenth street and Linden avenue, Sunday afternoon, August 26, 1923. Bishop John J. Cantwell was the principal speaker, and in his address stressed the devotion of the Sisters of Charity of the Incarnate Word, who are conducting the hospital. B. Von Wedelstaedt, M. D., secretary of the Harbor branch of the Los Angeles County Medical Association, in behalf of that organization, and H. G. Wilbur, M. D., the president, welcomed the new institution into the life of Long Beach. The hospital was formerly known as the Long Beach Hospital and Sanitarium before its purchase by the Sisters. Mother Placidus will have supervision of the hospital.

Important Action Taken by Lincoln Hospital—Harlan Shoemaker, M. D., secretary of the Los Angeles County Medical Association, has received the following letter from the Lincoln Hospital:

"Acting on the suggestion of our medical staff, the board of directors of the Lincoln Hospital Association has instructed me to notify the members of the medical profession of Los Angeles County that, beginning September 1, 1923, the Lincoln Hospital, located at 453 South Soto street, Los Angeles, will be open only to physicians eligible to membership in the American Medical Association.

Respectfully,

M. Janie O'Neill, R. N., Superintendent."

(From the Bulletin of the Los Angeles County Medical Association.)

SAN DIEGO COUNTY

San Diego County Medical Society (reported by Robert Pollock)—The San Diego County Society resumes its scientific sessions after the summer recess with a clinical meeting in the County Hospital, September 11. Members of the medical staff were present and discussed current cases of interest.

Ground has been broken during the past week for the new million dollar hospital for the Sisters of Mercy. This is eventually to take the place of the present St. Joseph's Hospital on University avenue, and will be a strictly modern hospital in every sense of the term. San Diego is fortunate in being able to place its newest hospital close in, accessible from every part of the city and at the same time in a quiet, detached and wonderfully scenic environment.

B. J. O'Neill has just returned from an extended trip abroad, during which time he visited the leading clinics of Great Britain and continental Europe.

L. H. Redelings announces his association with James Churchill in the Electric building, where they will continue to practice internal medicine.

The society mourns the loss of one of its former members, Dr. Claude Magee, who died recently in Los Angeles after a very brief illness. Dr. Magee was for many years a member of the San Diego Society, which latter looks upon his father, Dr. Thomas L. Magee, as the dean of the San Diego profession.

The San Diego County General Hospital—The following internes are announced for service beginning July 1, 1923: Dr. Nies, graduate of the College of Medical Evangelists, Los Angeles; Dr. Paez, graduate of Rush Medical College Chicago; Dr. Duncan, graduate medical department, University of Indiana; Dr. Leland, graduate College of Medical Evangelists, Los Angeles; Dr. Clark, graduate Jefferson Medical College, Philadelphia.

The hospital has just installed complete a new high-pressure sterilizing outfit in the surgical department. The X-ray department has been improved by the addition of a new Waffler transformer cabinet.

The County Board of Supervisors has recently bought a model dairy farm of about 110 acres, on which they will erect proper buildings for the housing and care of the indigents now cared for in the hospital. This will release considerable space for legitimate hospital purposes.

The Board of Supervisors is also planning extensive improvements about the grounds and approaches to the hospital, including boulevards and parking of a beautifying character and the paving of driveways from the nearest street car lines. The board has also recently installed new concrete tennis courts for the use of the internists and nurses.

The medical profession of the county is happy in having the co-operation of so intelligent and efficient Board of Supervisors. About a dozen young women are already enrolled for the freshman class in the nurses' training school, taking up their work in September.—(The Bulletin of the San Diego County Medical Society.)

Naval Hospital Note—The Post Convention Clinic at this hospital on the third of July started with an exhibition on the hospital grounds of a complete regimental field hospital outfit such as is held in readiness for emergency use at the Marine base. By permission of Brigadier-General Pendleton we were allowed the use of this outfit, which was explained by Commander J. L. Neilson, M. C., U. S. Navy. The outfit consisted of dispensary tent, with all its equipment; a ward tent, six cots provided with mosquito bars, operating tent with complete outfit, medical officers' tent, tent for use by enlisted men, and a commissary tent. There was, in addition, a fully equipped field kitchen, sanitary latrines, urinals, garbage incinerator, Lyster bag filled with

water, two adjoining small water reservoirs, one of which was protected against mosquito larvae by the use of kerosene, and the other by minnows, showing the methods in use in tropical countries against the mosquito pest.

At about 12 o'clock an airplane marked with the Red Cross appeared over the hospital to indicate the transfer of a patient by airplane to this institution. Due to the fact that landing facilities in this vicinity were not available, the airplane had to return to the Marine base landing place for the transfer of patient to ambulance.

An informal luncheon was served at the Subsistence building to the visiting physicians, which was attended by about fifty to sixty physicians.

The scientific part of the meeting commenced at 2 o'clock, and was opened by introductory remarks by myself, in which the importance of tropical diseases to the Navy was considered. The data for the paper read were gathered from available articles contained in the Naval Medical Bulletin and also from data derived from other sources. To emphasize the importance of the subject the experiences of the Navy with yellow fever, aboard ship principally, were gone into as far back as 1878. Outbreaks of black water fever on board ship were mentioned; precautionary measures used on board ship, especially in Asiatic waters, against the outbreak of tropical diseases, were dwelt upon. The prevailing tropical diseases in Guam, Hawaii, Samoa, the Philippines and West Indies were brought to the attention of the audience. Illustrations from articles written by members of the Naval Medical Corps were shown; likewise many photographs typifying the diseases mentioned, which had just been received from the Naval Hospital, Canacao, Philippine Islands, were shown.

Lieutenant F. E. Miller, M. C., U. S. Navy, presented a series of cases of ankylostomiasis treated with carbon tetrachloride. He pointed out that this is the best treatment so far developed; that one course of carbon tetrachloride will cure a majority of cases, and that two courses will cure 90 per cent of cases. It was emphasized that many cases of ankylostomiasis presented tachycardia and tremor and that all such cases should be differentiated from autotoxic imbalance and basal metabolism estimations performed.

Lieutenant-Commander W. H. Connor, M. C., U. S. Navy, presented cases of filariasis, and brought out the life history of the filaria within the human host and the mosquito, the factors necessary for its propagation, the various pathological conditions that filaria may cause, and the different drugs that have been and are being used for its eradication. The surgical treatment of certain forms of elephantiasis was mentioned.

Lieutenant-Commander J. B. Pollard, M. C., U. S. Navy, presented three cases of benign tertian malaria, with a short discussion of the subject in general, including geographical distribution, epidemiology, modes of infection, and treatment. Special stress was laid upon intravenous quinine therapy, and the use of this was strongly advised in all cases of malignant tertian infections. He also invited attention to the rather pertinent question of the incidence of malaria in the Sacramento valley of this state, following the introduction of artificial irrigation. Following his talk the three types of stained specimens of the parasites were demonstrated microscopically.

Lieutenant C. L. Andrus, M. C., U. S. Navy, presented cases of intestinal flagellate infestation, emphasizing the point that with our increasing knowledge of these protozoal parasites we should no longer look upon any of them as harmless organisms, but should in every case consider them as potentially pathogenic invaders of man in poor standing. In speaking of the importance of ascariis (unbricoides in relation to the surgical abdomen, a number of cases were cited from personal experience, in which the ascariis was responsible for a

wide variety of abdominal surgical pictures and conditions.

Lieutenant-Commander W. D. Owens, M. C., U. S. Navy, presented a series of twenty cases of amoebiasis taken from the records of the hospital during the past two years. It was emphasized that increasing accuracy of diagnosis and more frequent examinations for intestinal parasites is rewarded by an increased number of cases in which amoebae are found present and associated with the patients' symptoms. Over half the cases presented were of the non-dysenteric type and offered a more interesting clinical study. The experience in the treatment of cases of amoebic dysentery at the Naval Hospital indicates that cures may be obtained with the ipecac transduodenal method of treatment or with the emetine hydrochloride and salvarsan treatment, but that emetine alone will not cure amoebic dysentery.

Lieutenant-Commander H. A. Garrison, M. C., U. S. Navy, spoke of the prevalence of gangosa in the Ladrone Islands, and gave it as his opinion that the disease might possibly be a quaternary form of syphilis, the islands having for centuries been visited by whalers, and later having been garrisoned by Spanish soldiers, both offering strong possibilities of infection of the native element. This opinion seems to be supported by the efficacy of the anti-syphilitic treatment. Many typical pictures of cases of gangosa were shown before and after treatment with salvarsan.

Lieutenant-Commander Frederick Ceres, M. C., U. S. Navy, gave a talk on the duties of flight surgeon.

Lieutenant H. S. Sumerlin, M. C., U. S. Navy, demonstrated tropical disease slides. The following microscopic specimens were shown: *Filaria bancrofti*, living embryos; *E. histolytica*, motile; *E. histolytica*, encysted; Flagellates, cercomonas intestinalis, motile; *Monila psilosis* (Ashford); Hookworm ova; *Trypanosoma cruzi*; *Leishmania infantum*; *Schistosoma mansoni*; *Schistosoma japonicum*; Malaria, tertian; Malaria, quartan; Malaria, aestivo-autumnal.

The clinic was concluded at about 5 p. m. The number in attendance outside of members of the Medical Corps of the Navy was fifty visitors.—(F. W. F. Wieber, M. D., The Bulletin of the San Diego County Medical Society.)

Paradise Valley Sanitarium—The new 100-bed addition to the Paradise Valley Sanitarium is now rapidly filling up with patients and is relieving the congested condition of that institution.—(Bulletin of the San Diego County Society, August 10, 1923.)

SAN FRANCISCO COUNTY

San Francisco County Medical Society (reported by J. H. Woolsey, secretary)—During the month of August, 1923, the following meetings were held:

Tuesday, August 7—Committee on Medicine. (1) Calcification in Brain Tumors, R. R. Newell; (2) Consideration of Some Interesting Congenital Heart Lesions, C. H. Arnold.

Tuesday, August 14—General Meeting. (1) Studies on a Patient with Pituitary Dysfunction, W. T. Cummins and W. F. Schaller; (2) Some New Therapeutic Applications of Carbon Tetrachloride, H. E. Alderson; (3) Headaches of Ocular Origin, Roderic O'Connor.

Tuesday, August 21—Committee on Industrial Medicine. (1) Industrial Injuries Affecting the Genito-Urinary System, L. P. Player; (2) Industrial Injuries to the Eye, William F. Blake.

St. Joseph's Hospital Staff Meeting—At the monthly meeting of St. Joseph's Hospital staff of San Francisco on September 12, "Practical Endocrine Therapy," by A. C. Bothe, and "Insulin in Surgery of Diabetics," by J. F. Cowan, were the features. R. V. Lee and E. Shepardson discussed cases illustrating the latter topic.

T. W. Cummins reported upon new containers for

laboratory specimens and regulation of fees for examination. I. C. Gobar presented case histories of cirrhosis of the liver and ruptured appendix, and William Quinn one of toxic nephritis in a newborn.

On October 10, Harold Wright will speak on "Neuro Circulatory Asphenia," and Paul Castellun on "Indications and Contra-Indications for Ochsner Treatment."

Meeting of Catholic Hospital Association—The California, Arizona and Nevada group of the Catholic Hospital Association held its annual meeting in San Francisco the 22d and 23d of August, under the presidency of Sister Zoe of Mary's Help Hospital. This is the second annual meeting of the conference in which representatives of all Catholic hospitals of the three states assemble and discuss various phases of hospital management and the results of experiments tried during the past year.

In addition to the Sisters and officers of the association, Rev. P. J. Mahan, S. J., vice-president of the Association of Catholic Hospitals of the United States and Canada, was present and took part in the work. The committee of arrangements included William C. Hopper, A. S. Keenan, A. S. Musante, and V. C. Derham. The convention was opened by an address of welcome and prayer by Archbishop Hanna.

SONOMA COUNTY

Sonoma County Medical Society (reported by N. Juell, secretary)—The society met on Thursday, September 13, in Santa Rosa, with twenty-one members present, thirteen absent, and one visitor.

Joseph H. Shaw, recently returned from an eighteen months' study in European medical centers, gave a vivid picture of the conditions and his experiences in meeting many of the greatest medical men in Europe.

SIR WILLIAM MACEWEN'S ADDRESS TO THE CALIFORNIA ACADEMY OF MEDICINE

Sir William Macewen, Regius Professor of Surgery in the University of Glasgow, recently passed through San Francisco on his way to Australia as Ambassador from the British Medical Association, of which he is past president, to the Australian Medical Association in connection with a proposed union of the two societies.

On his journey through the United States he made the ascent of Pike's Peak, visited Salt Lake City, spent a day among the orange groves of Southern California, another in the Giant Forest east of Visalia and two days in San Francisco.

On September 20 he was the guest of the California Academy of Medicine, where he spoke before an audience of some 150 physicians. Among those present were Ray Lyman Wilbur, T. W. Huntington, Adolph Barkan, James H. Parkinson, Stanley Stillman, Emmet Rixford, Wallace I. Terry and many others who had attended the first course of Lane Medical Lectures.

In his address he referred to his former visit to San Francisco when he gave the first series of Lane Medical Lectures—ten lectures on the surgery of the brain in 1896. Being in a reminiscent mood, he told of how much at home he felt in California, though he added that might be considered natural since a Scotchman is said to be never so much at home as when he is abroad. He characterized Dr. L. C. Lane as a man of great erudition, whose pocket copies of Tacitus and Virgil were well thumbed. He spoke also of Dr. Edward R. Taylor, physician, lawyer, poet, who has just recently passed on. He remembered also "two byes"—Stillman and Rixford. He wondered why we are continually asking people to talk to us—we seem not to appreciate the beautiful communion of silence.

He illustrated the idea by the story of Emerson's call on Carlisle, when the two great authors sat in silence and smoked and smoked and smoked, and when Emerson rose to go at the end of two hours, Carlisle grasped his hand and said, "Aye, mon, but we've had a gra-a-and time."

He drew a picture of the age-old sequoia looking down in kindly silence on the chattering squabbles of a group of chipmunks over some bits of nut candy, and suggested that it would look down with equal serenity on the similarly trivial struggles of men.

His principal address turned on the matter of using one's faculties—his eyes, his ears, and common sense—in surgery, instead of relying exclusively on what is printed in books. He asked what would happen if all the books were burned, and answered the question by suggesting that in that event some new books might be written. He used as a title, "The Physics of the Pleura in Relation to the Surgery of the Lung and Pleura"—a field in which he was a pioneer and early combated the then prevalent idea that the instant the pleura is opened ever so slightly the lung will collapse for the reason that it is held in contact with the parietal pleura by atmospheric pressure.

In furtherance of his idea Sir William cited the example of the toy which most boys have used—the wet leather sucker, which, held by a string fitted in its center, will lift a heavy stone. He recalled a dinner given many years ago in his honor by some members of the Royal Society, when he asked for an explanation of the phenomenon. The physicists present answered to a man, "atmospheric pressure." "Well, if it were atmospheric pressure, and the sucker and stone were suspended in a bell-jar and the air exhausted, the stone would fall?" "Yes, surely." "Ay, but it doesn't." He submitted the matter to Lord Kelvin (Sir William Thompson), who was inclined to view experiment with suspicion, as prone to lead to erroneous conclusions. Lord Kelvin became so absorbed in the problem that Lady Kelvin asked Dr. Macewen, "What is it that you have done to my husband? He can neither eat nor sleep since you called upon him the other day." In a few days Lord Kelvin called on Dr. Macewen in triumph. "I have it! I have it! It is capillarity, molecular adhesion, an immense force, and here is the formula for it."

Sir William held that so long as the two layers of the pleura—the conjunctiva, pericardium, peritoneum, etc., for that matter—are kept moist and in contact, they adhere because they are "optical" surfaces; that if the air in a pneumo-thorax reappears after aspiration as in perforating injuries of the lung, wide surgical opening should be made and the wound packed to provide a vent for the air, whereupon if the chest wall be compressed so as to bring it into contact with the collapsed or compressed lung the moist pleural surfaces will adhere and the lung expand and resume its respiratory function at once.

The same thing is true after the removal of lung tumors if they are not so large as to leave a defect so great that contact of the visceral and parietal pleura cannot be accomplished.

Sir William further stated that because of the peculiar distribution of the blood vessels in the periphery of the lung, bleeding was more apt to be severe if the lungs were ballooned out by differential pressure. In some cases it was of advantage to work on the lung with the patient lying on that side, the work being done as it were from below. Seldom was it necessary to resort to differential pressure in surgical operations on one side of the chest. Lung abscesses should be freely opened. If too much of the lung is destroyed to permit of expansion of the lung to fill the cavity, the chest wall should be correspondingly resected. In one case operated on by him for tuberculosis of the lung with abscess he was obliged to remove the

entire lung, though he thought it prudent to leave a small piece of lung tissue which was adherent to the left subclavian vein. This bit of lung kept up an insignificant discharge long after the remainder of the wound had healed. The operation was done twenty-nine years ago and the man is still in good general health and has earned his living as a carpenter and supported his family.

In one case after excision of large areas of the left lung the patient complained of his heart flopping when he tried to turn to the left. This was remedied by fixing the pericardium to the chest wall by suture.

Sir William expressed great pleasure in being again in California, and thanked members of the Academy for the enthusiastic reception they had accorded him.

The Physiologic Effects of Ethylene—The toxicity of ethylene for flowering plants suggested to A. B. Luckhardt and J. B. Carter, Chicago (Journal A. M. A., March 17, 1923), the possibility that some of the toxic properties of ordinary illuminating gas for animals might be due to its ethylene rather than to its carbon monoxid content. Experiments were made on animals and on man. From the animal experiments it appears that all of the animals used (mice, rats, rabbits, guinea-pigs, and kittens) could be anesthetized with a 90 per cent ethylene mixture in one-half the time necessary to anesthetize the same animals with the same percentage of nitrous oxid. Twelve subjects were anesthetized, more or less deeply. One of the authors was anesthetized six times in three days in three weeks; the other (J. B. C.), seven times on the three days in three weeks. In neither instance did sugar or albumin appear in the urine as a result of the experiences, nor did they experience any other evil after-effects except for a slight nausea and loss of appetite, both of very temporary nature. It is evident, then, that deep surgical anesthesia can be rapidly induced by ethylene without any sense of asphyxia, but, on the contrary, with a sense of well-being and comfort. Analgesia comes on easily apparently long before complete surgical anesthesia is established. At a time when there is complete muscular flaccidity, the pulse rate is slightly decreased, if changed at all; respirations are slow but regular, and the countenance normal in color for the individual, or slightly paler. No cyanosis was ever observed. No subject ever showed any sign even suggestive of asphyxia. The induction of anesthesia was in no way unpleasant except possibly for the first few inhalations of the concentrated gas, which induced reflex swallowing. A period of excitement characterized by laughing or forced movement preceded the anesthesia in some. In others, such signs were absent during induction, but were in evidence as the person recovered from the anesthesia. Recovery from the anesthesia was always rapid on withdrawal of the gas mixture. In all, slight weakness and a sense of fatigue were experienced if the person arose from the couch almost immediately on waking up. Vomiting occurred in one early during recovery. In some, slight epigastric distress was experienced temporarily. In others, a slight nausea persisted for several hours after the administration of the gas. In none was nausea so pronounced or so prolonged as to interfere with the ingestion of the next meal. The possible advantages of ethylene over nitrous oxid, if used for human anesthesia, are: 1. Anesthesia may be maintained: (a) in the absence of all signs of asphyxia; (b) in the absence of effects on blood pressure; (c) in the absence of dyspnea; (d) with complete muscular relaxation. 2. It may be used in obstetrics, a state of complete analgesia being possible at a concentration of 80 per cent ethylene. 3. There is rapid recovery after long-continued administration, without evidence of after-effects.

MEDICAL ECONOMICS

Why not let our advertisers help you?

Exhibits at the Hospital Conference—One of the instructive features of the third annual conference of the Hospitals of California, which will be held at the Fairmont Hotel, San Francisco, October 18, 19 and 20, will be the exhibits. All delegates and visitors will be given an opportunity to examine the most modern hospital apparatus and equipment. Demonstrators will be on hand to furnish practical information on the latest improvements in hospital supplies. Ample time is provided on the program before and after sessions for the delegates to become acquainted with the most modern hospital manufacturing achievements offered by the exhibitors. Among our advertisers who will have exhibits are the following:

Reid Brothers, wholesale hospital supplies; Travlers Surgical Company, surgical instruments and hospital supplies; Radium Chemical Company, radium and radium preparations; Mead Johnson & Co.; Walters Surgical Company, sterilizers, laboratory and sick room supplies; The Reno Optical Company, Reno, Nevada; Wilmot Castle Company, sterilizer equipment; Bischoff's Surgical House, trusses, supporters, elastic hosiery, etc.; Doctors and Nurses Outfitting Company, Inc., designers and makers of all kinds of doctors and dentists jackets, gowns, etc.; Corona-Pacific Typewriter Company, Inc., typewriters; Wilson Laboratories, Morgan & Sampson, sales agents; Bausch & Lomb Optical Company of California, eyeglasses, magnifiers and reading glasses, etc.; Fischer & Bradshaw, electric sterilizers, mercury vapor lamps, etc.; Frank F. Wedekind Company, surgical appliances; Hanovia Chemical and Manufacturing Company, Alpine sun lamp, Kromayer lamp, etc.; Bush Electric Corporation, X-ray, electro-medical and physio-therapy apparatus and supplies; Horlick's Malted Milk; The American Laundry Machinery Company.

New Catalogue of the Frank S. Betz Company—This company, Hammond, Ind., has just issued the new Betzco Physicians' Supply Book, displaying the entire standard high-grade Betzco line. Clip the coupon on page 420 and get your copy.

Disposition of Ureters in Certain Abnormal Conditions of Urinary Bladder—William E. Lower, Cleveland (Journal A. M. A., April 28, 1923), summarizes his paper as follows: "Transplantation of the ureters is an operation urgently indicated in the presence of certain malformations of the bladder, either congenital or acquired. The choice of site should be one to which the transplantation can be made with the minimum of immediate operative mortality and a maximum of ultimate comfort to the patient. From my own series, I believe that the submucous implantation of the ureters in the sigmoid or rectum by the technic first proposed by Coffey most nearly fulfils the foregoing requirements. In any case, agreement regarding the most efficient method of treating the class of patients on whom this operation is required is needed in order that the technic may be standardized. The basis of judgment for the final selection of such a standardized technic should be its ability to give to the patient the utmost possible diminution of his misery and the best possible economic status."

Nevada State Medical Association

By HORACE J. BROWN, M. D., Reno, Secretary Nevada State Medical Association, Associate Editor for Nevada.

J. LA RUE ROBINSON, Reno, President

Annual Meeting—At the time of going to press the Nevada State Medical Association was in annual session at Reno. The officers and committees are:

Officers—John LaRue Robinson, Reno, president; Anthony Huffaker, Carson City, first vice-president; Rodney H. Richardson, Reno, second vice-president; Horace J. Brown, Reno, secretary-treasurer; A. J. Hood of Elko, A. C. Olmsted of Wells and W. A. Shaw of Elko, trustees.

Council—C. E. Swezy, Winnemucca; J. W. Davis, Hawthorne; A. J. Hood, Elko; S. K. Morrison, Reno; R. Craig, Tonopah; A. L. Haenszel, Searchlight; O. Hovenden, McGill; C. A. Lehnors, Fallon; C. C. Blake, Goldfield.

Committees—Membership: C. W. West, J. B. Wilson, Hal L. Hewetson. Judicial: M. A. Robison, Donald Maclean, R. A. Bowdle. Scientific Work and Program: S. K. Morrison, A. P. Lewis, E. E. Hamer. Necrology: W. M. Edwards, F. M. Hodgins, C. E. Piersall. Entertainment: S. K. Morrison, George McKenzie, W. L. Samuels. Public Health and Education: Henry Albert, W. A. Shaw, M. R. Walker. State Organizer: John A. Fuller. Delegate to A. M. A.: Horace J. Brown. Alternate: J. LaRue Robinson.

PROGRAM

Friday, September 28, 1923, 9:30 A. M.,
Bowers Mansion

Business Meeting—Registration and payment of dues; reading of minutes of last annual meeting.

Scientific Program—Friday, 10 a. m.

President's Address—John LaRue Robinson.

Andrew Wade Morton, San Francisco—Report of a Case of Acute Osteomyelitis of the Femur. Discussion opened by J. T. Watkins, Donald Maclean, R. A. Bowdle.

William N. Kingsbury, Reno—Generalized Osteitis Fibrosa Cystica. Discussion opened by A. W. Morton, George McKenzie, T. W. Bath.

James T. Watkins, San Francisco—Infections of Certain Lymphatic Glands Which Simulate Tuberculous Disease of Neighboring Joints. Discussion opened by A. R. Kilgore, W. A. Shaw, W. M. Edwards.

Charles P. Knight, U. S. P. H. S., Washington, D. C.—Some Observations on Health Conditions in Nevada. Discussion opened by Alice L. Thompson, H. L. Hewetson, M. J. Rand.

Martin Molony, San Francisco—Congenital Diverticulum of the Posterior Urethra, with some remarks on the Modern Method of Treating Chronic Seminal Vesiculitis; lantern slides. Discussion opened by G. F. Farman, B. H. Caples, R. St. Clair.

Thomas Wilbur Bath, Reno—Resume of the Treatment of Septic and Aseptic Wounds. Discussion opened by Carl G. Wilson, M. L. Herzig, W. H. Riley.

Joseph Catton, San Francisco—How to Handle Neuroses Following Injury. Discussion opened by C. L. Tranter, R. H. Richardson, D. A. Turner.

Charles L. Tranter, San Francisco—Functional Recovery Following Operative Treatment of Brain and Nerve Injuries. Discussion opened by Jos. Catton, S. K. Morrison, R. P. Roantree.

Maxmillian L. Herzig, Seattle, Wash.—Undescended Testicle Complicating Acute Appendicitis: report of a case. Discussion opened by Jun. Harris, George McKenzie, W. H. Brennen.

George F. Farman, Los Angeles—Some Types of Chronic Recurrent Pyelitis and Their Treatment. Discussion opened by Martin Molony, C. C. Blake, A. J. Hood.

Friday, September 28, 8 P. M.

Chamber of Commerce, Reno

Business Meeting—Report of Delegate to A. M. A. Reports of various committees. Election of officers. Officers to be elected: A president, two vice-presidents, secretary-treasurer, one trustee for three years to succeed A. J. Hood.

Saturday, September 29, 9:30 A. M.,
Bowers Mansion

Ray Lyman Wilbur, Stanford University, president of the American Medical Association—Address.

Carl G. Wilson, Palo Alto, Cal.—A Plea for Improvement in Post-Operative Care of Laparotomy. Discussion opened by A. R. Kilgore, A. P. Lewis, W. M. Edwards.

William A. Shaw, Elko—A Peculiar Manifestation of Focal Infection; Treatment and Apparent Cure; Three Case Histories. Discussion opened by A. W. Morton, M. H. Crocker, A. R. DeCosta.

Alson R. Kilgore, San Francisco—Syphilis as a Pre-Cancerous Condition. Discussion opened by Walter Wessels, Martin Molony, V. A. Muller.

Claude E. Piersall, Reno—Present Status of X-ray and Radium Therapy. Discussion opened by A. R. Kilgore, W. N. Kingsbury, M. R. Walker.

Cullen F. Welty, San Francisco—Subject to be announced. Discussion opened by J. A. Fuller, D. L. Shaw, J. L. Robinson.

Carl L. Hoag, San Francisco—The Importance of Selecting Proper Treatment in Each Type of Goitre. Discussion opened by J. T. Watkins, R. St. Clair, E. E. Hamer.

Raymond St. Clair, Oakland—Exophthalmic Goitre; Importance of Early Diagnosis, with Report of Four Cases. Discussion opened by C. L. Hoag, M. A. Robison, W. C. Lucas.

S. M. Sproat, Portola, Cal.—Subject to be announced.

Walter Wessels, Los Angeles—Subject to be announced.

Ernest S. Du Bray, San Francisco—Diet Adjustment and Insulin Therapy in Diabetes Mellitus. Discussion opened by Walter Wessels, C. W. West, E. E. Hamer.

B. H. Caples, Reno—Bladder Decompression. Discussion opened by G. F. Farman, Alex. McIntyre, P. D. McLeod.

Sunday, September 30
Pyramid Lake

Barbecue Picnic, all day, under direction of Entertainment Committee.

Luncheon served Friday and Saturday at the Mansion. Formal banquet at the Hotel Golden, Reno, at 9 p. m. Saturday.

News Items—Members are urged to send any news items they may have to the Associate Editor, so that they may be sent to the California State Journal of Medicine for publication in the Nevada State Medical Association department.

New Members—The new American Medical Directory has just reached us, and in looking it over hurriedly we can find about thirty physicians in Nevada that are eligible for membership, and should belong to our association. Some of them have belonged, in years gone by, and had to be dropped from the roll because they were too busy to write a check for dues and send it to the secretary. Why don't you speak to your neighbor about it, if he is eligible? It would probably make you both feel better.

Utah State Medical Association

J. R. MORRELL, M. D., Ogden - - President
WILLIAM L. RICH, M. D., Salt Lake - Secretary
W. R. CALDERWOOD, M. D., Associate Editor for Utah

The course in post-graduate work which has been instituted by the Utah State Medical Association, and which was introduced by Harlow H. Brooks of New York last year, and was so well attended and so much appreciated by those in attendance, was continued this year by George W. Dock of Pasadena, Calif. The clinics this year were equally well attended, and those who were so fortunate as to be in attendance were greatly benefited and better fitted to render skilled service to their patients and the communities which they serve.

There was an attendance of sixty-five physicians from Salt Lake City and nearby localities, and we noticed at least one man from Idaho, our neighbor on the north.

Dock proved himself a master teacher. The intimate knowledge he exhibited of the wide range of subjects discussed in the clinics sustained for him the high opinion in which he is held by all those who know him or are familiar with his work.

His trip to Ogden and the clinic held there afforded an opportunity for many of the Ogden physicians to hear him at his best. The Ogden clinic was well attended and greatly appreciated by the Ogden physicians.

Those who were not able to attend the clinics held by Dock missed an opportunity that seldom comes our way. We commend the committee who so successfully handled the work, and hope another year will bring us equally good results.

Ralph O. Porter, the new dean of the Medical School of the University of Utah, is now on the campus, and we extend him a hearty welcome and assure him of our support and co-operation in the conduct of the Medical School.

County Medical Society work is now in full swing, and we bespeak for the officers of your association your hearty support and good-will. Let this be a year that you give to your society the best of which you are capable. Only by united effort and forward-looking can you hope to achieve the goal you have in view. Let us have some of your papers for publication in the Journal.

Analysis of Methods of Modern Medical Education—The reorganization of medical education is considered by William Cogswell Clarke, New York (Journal A. M. A., April 28, 1923), under five main subjects: (1) teachers; (2) students; (3) the subject matter included in a medical course; (4) methods of teaching and of study, and (5) the chief aims in medical education and the present hindrances to their attainment. Clarke's closing words show that it is his belief that the prime essential is the teacher. He says, "Only the best instructors should be chosen, because on them depends the selection of students and to a large degree their development and education. The surest way to have many good instructors available is continuously to develop them from those possessing the greatest apparent potentialities. Teachers who do not continuously prove of value should not be allowed to remain in a school. The method maintained should aim for the selection and maintenance of good teachers and laboratory workers, for under them any method of education is successful."

BOOK REVIEWS

The Heart in Modern Practice, Diagnosis and Treatment. By William Duncan Reid, A. B., M. D. 352 pp. Illustrated. Philadelphia and London: J. B. Lippincott Company. 1923.

The author has some good thoughts on the subject, and he has tried to convey those thoughts to the reader in a brief and concise manner—so brief, in fact, that at times one feels as if he is being hurried.

The book serves fairly well as a sort of review of cardiology, but it will not be of service to a student of the subject principally because of its briefness, and next because in presenting a debatable subject he does not give both sides of that subject, as he leads one to infer that "there is very little blood regurgitated into the left ventricle in cases of aortic regurgitation because the blood has not time to flow back." He does not say why it is called "aortic regurgitation" nor what causes the marked enlargement of the left ventricle, nor the diastolic murmur, nor why the blood cannot flow back from the aorta, where it is under high pressure, as rapidly as it can flow from the left auricle (where it is not under high pressure).

He speaks of methods, etc., of examining the heart and of its structural anatomy, but says nothing of the surface anatomy. H. S.

BOOKS RECEIVED

The Practical Medicine Series, comprising eight volumes on the year's progress in medicine and surgery. Under the general editorial charge of Charles L. Mix, M. D., Volume 1, General Medicine. Edited by George H. Weaver, M. D.; Lawrason Brown, M. D.; Robert B. Preble, M. D.; Bertram W. Sippy, M. D.; Ralph C. Brown, M. D. Series 1923. Chicago: The Year Book Publishers, 304 South Dearborn street.

The Medical Department of the United States Army in the World War. Volume 1. The Surgeon-General's Office. Prepared under the direction of Major-General M. W. Ireland, M. D., Surgeon-General of the Army. By Colonel Charles Lynch, M. C.; Lieutenant-Colonel Frank W. Weed, M. C.; Loy McAfee, M. D. Washington: Government Printing Office, 1923.

Hygiene of the Voice. By Irving Wilson Voorhees, M. D., Assistant Surgeon to the Manhattan Eye, Ear and Throat Hospital; Adviser to Singers of the Metropolitan, Chicago and Century Opera Companies, etc. New York: The MacMillan Company, 1923.

A Clinical Guide to Bedside Examination. By Dr. H. Elias, Dr. N. Jagic and Dr. A. Luger, all of Vienna. Arranged and translated by William A. Brams, M. D., Adjunct in Medicine, Michael Reese Hospital. New York: Rebman Company.

See page 437 for Program of Annual Hospital Conference, October 18, 1920.

Pharmacology and Therapeutics

COUNCIL ON PHARMACY AND CHEMISTRY OF THE A. M. A.

(Reported by W. A. Puckner, Secretary)

The Council on Pharmacy and Chemistry reports a number of new remedies admitted to New and Non-official Remedies, as well as some interesting data about other remedies:

Lederle Antitoxin Laboratories—Thromboplastin (Lederle).

National Aniline & Chemical Co.—Enteric Coated Tablets Neutral Acriflavine—"National"; Ointment Neutral Acriflavine—"National," 1 per cent.

E. R. Squibb & Sons—Solution of Hypophysis (Squibb); Arsphenamine (Squibb), 1 gm.; Arsphenamine (Squibb), 1.2 gm.

Winthrop Chemical Co.—Luminal Tablets $\frac{1}{2}$ gr. (Winthrop Chemical Co.).

NEW AND NON-OFFICIAL REMEDIES

Protein Mixtures for Diagnosis—Mixtures of two or more pollen, epidermal or food protein preparations. These mixtures are supplied in order that the number of skin tests to determine sensitiveness to proteins may be reduced. If sensitiveness to a given protein mixture is found, then tests are made with the individual proteins contained in the mixture. (See Pollen and Epidermal Extracts and Biologically Reactive Food Proteins, New and Non-official Remedies, 1923, p. 234.)

Group Allergens Diagnostic (Squibb)—A mixture of two or more allergens (Squibb) in equal proportions. These protein mixtures are used to determine sensitiveness to proteins. (See preceding article, Protein Mixtures for Diagnosis). Group Allergens (Squibb) are marketed in vials containing 0.025 gm.

Pollen Antigens (Lederle)—In addition to the products listed in New and Non-official Remedies, 1923, p. 239, the following have been accepted: Annual Salt Bush Pollen Antigen (Lederle); Bermuda Grass Pollen Antigen (Lederle); Cocklebur Pollen Antigen (Lederle); Johnson Grass Pollen Antigen (Lederle); Mountain Cedar Pollen Antigen (Lederle); Mugwort Pollen Antigen (Lederle); Oak Pollen Antigen (Lederle); Orchard Grass Pollen Antigen (Lederle); Perennial Rye Grass Pollen Antigen (Lederle); Rabbit Bush Pollen Antigen (Lederle); Redroot Pigweed Pollen Antigen (Lederle); Russian Thistle Pollen Antigen (Lederle); Spiny Amaranth Pollen Antigen (Lederle); Yellow Dock Pollen Antigen (Lederle). Lederle Antitoxin Laboratories, New York. (Jour. A. M. A., August 4, 1923, p. 393.)

Protein Extracts Diagnostic (P. D. & Co.)—Protein extracts in the form of paste the base of which is a mixture of glycerin and powdered boric acid. One part represents one part of original material. For a discussion of the actions, uses and dosage, see Pollen and Epidermal Preparations and Biologically Reactive Food Proteins, New and Non-official Remedies, 1923, p. 234. Protein Extracts Diagnostic (P. D. & Co.) are marketed in collapsible tubes containing sufficient material for fifty tests.

Group Protein Extracts Diagnostic (P. D. & Co.)—A mixture in equal proportions of two or more Protein Extracts Diagnostic (P. D. & Co.). For a discussion of the actions, uses and dosage, see preceding article, Protein Mixtures for Diagnosis. Group Protein Extracts Diagnostic (P. D. & Co.) are marketed in collapsible tubes containing sufficient material for fifty tests.

PROPAGANDA FOR REFORM

Collosol Calcium—E. E. Prest (Brit. Med. J., Jan. 14, 1922) recommended a new "collosol" brand of

so-called colloidal calcium for the treatment of tuberculosis. T. C. Graves (Lancet, Nov. 4, 1922) discussed "Colloidal Calcium in Malnutrition, Chronic Sepsis and Emotional Disturbances." The publications of Prest and Graves serve as uncritical endorsements of another addition to the Collosol preparations. The conclusions reached by Graves concerning the beneficial action in the treatment of "Emotional Disturbances" do not seem justified by the character of the evidence he presents. Such results as he reports are common experiences without the use of medication. There is no basis, either in theory or in the evidence presented, for administering a calcium salt in colloidal form; if advisable, soluble compounds of calcium, such as the lactate and chlorid, may be administered hypodermically. Thanks to the timely report of the Council on Pharmacy and Chemistry, the Collosol preparations are not being pushed in the United States, though they are being actively exploited in England. (Jour. A. M. A., Aug. 4, 1923, p. 409.)

C-O-M Not Accepted for N. N. R.—The Council on Pharmacy and Chemistry reports that "C-O-M" is the proprietary, non-informing name under which the H. D. Frees Co., Chicago, exploits a preparation which is claimed to be the solution of magnesium citrate of the U. S. Pharmacopoeia, but to have the advantage over the official preparation in that it keeps indefinitely. The Council refused recognition to "C-O-M" because, 1, the application of a proprietary name to a pharmacopoeial article is irrational and a detriment to rational therapy; 2, as solution of magnesium citrate is readily prepared fresh and of standard quality by pharmacists, the claim of stability is not a sufficient warrant for the use of a proprietary name for an official article; 3, the therapeutic claims for "C-O-M" are unwarranted; and 4, the advertising propaganda is likely to lead to the excessive and ill-advised use of the preparation by the public. (Jour. A. M. A., Aug. 11, 1923, p. 493.)

Two More Electronic Diagnoses—A physician reports that one of his patients became alarmed by a diagnosis of generalized carcinoma made by an osteopath who is a disciple of Albert Abrams. In order to test the diagnostic ability of this disciple of Abrams, the physician had the patient send the Abrams disciple a specimen of blood (which was taken from a young rooster who had been confined to his coop since birth) for diagnosis. The diagnosis which was received showed syphilis, gonorrhea, generalized carcinoma, sarcoma of the spine, chronic malaria and diabetes. Another physician reports a diagnosis made by an Abrams follower on a man who is working and by no means ready to die. The diagnosis showed "diminished resistance" (an Abrams euphemism for syphilis), "carcinoma of gall-bladder," "streptococcus," "sarcoma of both kidneys, right worse," "tuberculosis of both lungs, upper right and middle left," "sarcoma," "gallstones," "malaria," and "pneumonia." (Jour. A. M. A., Aug. 11, 1923, p. 493.)

Bacillus Acidophilus Therapy—A method for the preparation of Bacillus acidophilus milk has been published by Rettger and Cheplin (Arch. Int. Med., vol. 29:357 [March], 1922). Microscopically, Bacillus acidophilus closely resembles the Bacillus bulgaricus, but cultural methods of distinction have been proposed. The therapeutic value of the various lactic acid ferment preparations is discussed in New and Non-official Remedies, 1923. While recent publications give evidence in favor of Bacillus acidophilus therapy, W. H. Morris expresses the belief that whatever beneficial results occurred in the cases reported by him were due to some other factor than the actual transformation of the common intestinal bacteria into the acidophilus type of organism. (Jour. A. M. A., Aug. 11, 1923, p. 494.)

Tapeworm Remedies—Oleoresin of aspidium and pelletierin tannate are the remedies of choice, the first being more popular. To give the remedies the best chance for action, the intestinal contents should

be reduced as much as possible by restriction of solid food and evacuation before the treatment. On the morning of the treatment the patient should stay in bed and be given from 6 to 8 gm. of oleo-resin of aspidium divided into as many capsules in the course of ten to fifteen minutes. Two hours later a saline cathartic should be administered and repeated every two hours until thorough evacuation has been secured. (Jour. A. M. A., Aug. 11, 1923, p. 495.)

The Chlorin Antiseptics—The essential attributes of Surgical Solution of Chlorinated Soda (N. N. R.) is a definite but mild alkalinity, hypertonicity, and presence of the correct amount of sodium hypochlorite. Because hypochlorite solutions are unstable and their active component is not available in solid form, chloramin-T, dichloramin-T, and halazone were evolved. The first two have been received as worthwhile additions to our materia medica. Because the three products contain their chlorin in its less stable modification, the composition and purity of these products have been watched by the A. M. A. Chemical Laboratory. Recently, P. N. Leech of this laboratory reported on the quality of the market supply of American-made chloramin-T, dichloramin-T, and halazone, which are described in New and Non-official Remedies. Out of eight specimens of chloramin-T, one was considerably substandard, two were slightly substandard, and five were satisfactory. The chloramin-T tablets, chloramin-T pastes, and an aromatic powder were satisfactory. Two out of four specimens of a surgical powder were markedly decomposed. All the specimens of Council-accepted dichloramin-T complied with the standards. Re-examination of specimens of the chloramin examined five years previously showed that chloramin-T and halazone are quite stable, but the dichloramin-T specimens had decomposed somewhat. Leech believes that both the hypochlorite preparations and the chloramins are active oxidizing agents because of the positively charged chlorin atom which they contain, and that their antiseptic action depends on this. He determined that the oxidizing power of chloramin-T is much greater in neutral than in even slightly alkaline solutions. From this it is apparent that one strength of a solution of pure chloramin-T may be active as a germicide while a solution of the same strength containing sodium bicarbonate may be ineffective. (Jour. A. M. A., Aug. 18, 1923, p. 581.)

Iodin as a Prophylactic for Goiter—The conclusion of Marine and Kimball that the administration of iodine constitutes an efficient and safe method of preventing goiter is being amply confirmed. In Switzerland the results appear even more favorable than those reported in this country, and the goiter commission of Switzerland has recommended that this method of goiter prevention be instituted as a public health measure throughout the republic. In this country the schools of Akron, Kent, and Ravenna counties, in Ohio, have been using the method as a routine. It has been employed in Berea and Warren, Ohio, and extensively administered in some of the large factories in Cleveland. This year the schools in East Cleveland, Shaker Heights, Warren, Niles, and Findlay, Ohio, Grand Rapids, Mich., and Hammond, Ind., are using tablets, each containing 10 mg. of iodine in the form of an organic iodide, and each girl takes one tablet a week throughout the year. (Jour. A. M. A., Aug. 18, 1923, p. 582.)

Administration of Iodid for Goiter—For the prophylaxis of goiter, Marine and Kimball employed 2 gm. of sodium iodide given in 0.2 gm. doses daily for ten consecutive school days. This was repeated twice yearly. Marine and Kimball state that this amount of iodide is excessive and that 1 gm. of sodium iodide distributed over a longer period would be better. Sodium iodide may be prescribed in solution, a dose to a teaspoonful. If the patient be furnished with a small quantity of potassium iodide—say 1 gm.—and advised to mix it thoroughly with

1 kg. of ordinary table salt for occasional seasoning of his food at the table, he will get all the iodide that is necessary for prophylactic purposes and in an entirely unobjectionable manner. (Jour. A. M. A., Aug. 18, 1923, p. 598.)

Bismuth Preparations in Syphilis—The Council has issued a statement of the present status of bismuth preparations in the treatment of syphilis. In this report the history of the use of bismuth salts in the treatment of syphilis is reviewed, the evidence for the value of bismuth salts as compared with mercury preparations and arsphenamine is considered, and the dosage and danger of untoward effects are discussed. The statement of the Council concludes with the following summary:

1. Bismuth preparations have a sufficient experimental basis both for their favorable effects and limitations. The advantage consists in their distinct action on experimental syphilis. The limitations are clear, if one considers the disproportion between the large dose, which is necessary to sterilize an animal, and the small dose, which can be tolerated by man. The available information appears to show that bismuth preparations will not cure syphilis when used alone.

2. Bismuth treatment is not usually injurious if the necessary precautions (observations for beginning stomatitis, examination of urine, etc.) are observed. Intravenous injection is to be strictly avoided. The therapeutic effect of bismuth is rated by the majority of authors between arsphenamine and mercury. Bismuth compounds may be valuable in cases in which the patients are intolerant to the other drugs used in the treatment of syphilis or resistant to them, as shown by a persistent positive Wassermann reaction. (Jour. A. M. A., Aug. 25, 1923, p. 661.)

The Thyroid Hormone—The fact that the iodine-bearing compound, thyroxine, which has been isolated from thyroid tissue, has a marked physiologic potency has led many persons to speak of it off-hand as the "active principle" of the thyroid glands. However, Reid Hunt has carried out tests which indicated that, for certain functions at least, thyroxine shows less potency than an equivalent dose of iodine in the form of the entire thyroid gland. One is led to ask whether the iodized protein fragment represented by thyroxine retains all of the specific physiologic action of the real thyroid hormone. Hektoen, Carlson, and Schulhof report that they have detected the presence of a thyroid product, thyroglobulin, in the lymph issuing from the thyroid gland, but failed to detect the same protein in the blood stream. (Jour. A. M. A., Aug. 25, 1923, p. 665.)

Albargin Not Accepted for N. N. R.—The Council on Pharmacy and Chemistry declares Albargin inadmissible to New and Non-official Remedies because (1) it is an unessential modification of silver nitrate, and (2) the therapeutic claims made for it are unwarranted. Albargin is a product of the Farbwerke, vorm. Meister, Lucius and Bruening, Hoechst, a. M., Germany, marketed in the United States by the H. A. Metz Laboratories, New York. It is claimed to be a compound of silver nitrate with gelatose, containing 15 per cent of silver. Albargin is claimed to combine the advantages of albumin compounds of silver and of silver nitrate. It is claimed to dialyze through animal membrane and, therefore, to possess far greater power than other albumin compounds of silver. It is claimed to produce neither irritation nor pain. The Council found that the silver of Albargin was not combined with the gelatose, but is in the same condition as the silver of silver nitrate; that it does not dialyze through animal membrane, and that its antiseptic value is the same as that of a silver nitrate solution of equal silver content. (Jour. A. M. A., Aug. 25, 1923, p. 677.)

Coating for Pills to Resist Gastric Juice.—The attempt to prepare pills, tablets or capsules which

will pass the stomach unchanged, but which will disintegrate in the intestine, has not proved very successful. In the main, the attempt has been to coat such pills, tablets or capsules (a) with keratin or phenyl salicylate (salol); (b) with gelatin rendered insoluble by treatment with formaldehyd, and (c) by mixing the drug with wax, solid fats or paraffin. Keratin coating has been reported unsatisfactory by the A. M. A. Chemical Laboratory. Coating with phenyl salicylate has the objection that the coating is brittle, and that it requires the administration of a considerable dose of phenol salicylate. The difficulty in the coating with hardened gelatin is that, if the treatment with formaldehyd is insufficient, the pills will not pass the stomach unchanged, and, if the treatment is prolonged, the coating will not disintegrate in the intestine. Favorable reports have been published of the method of combining drugs, such as sodium carbonate, potassium iodid, sodium salicylate, etc., with mutton suet and paraffin, or with a mixture of beeswax and castor oil previously melted together. (Jour. A. M. A., Aug. 25, 1923, p. 679.)

Gastric Ulcers—That gastric ulcer can be diagnosed by means of the Roentgen ray as definitely as can a fracture of an extremity, and, that if properly employed, the Roentgen-ray test is far more accurate for diagnosis of ulcer than the Wassermann test is in the case of syphilis is the claim made by Lewis Gregory Cole, New York (Journal A. M. A., July 28, 1923). The methods of studying the pathologic changes of gastric ulcers are: (1) necropsy, (2) biopsy, and (3) roentgenology. The limitations of the first two methods are apparent. The scope of the third is unlimited, and the operation is relatively simple. By serial roentgenology with examination frequently repeated, one may study the gross pathologic changes of gastric ulcer, the size and shape of the crater, the amount of induration surrounding it, its location in the stomach and its increase or diminution in size during periods of exacerbation or recession of symptoms, and may determine whether any cases of simple gastric ulcer ever become malignant. Different methods of employing the Roentgen ray in the diagnosis of gastric ulcers are (1) a fleck of bismuth subnitrate barium remaining in the crater of an ulcer; (2) symptom complexes, and (3) morphologic changes in the walls of the stomach. The first two are unreliable, and the last is accurate, as the pathologic change in the wall of the stomach can be definitely shown; it is on this, and this only, that the diagnosis can be accurately made. Many ulcers leave a scar, so that the roentgenologic appearance must be considered.

The Relativity of the Everyday — Whether we think in terms of three dimensions or of four, the relativity of the everyday things of life has long been apparent. We measure our pleasures and our sufferings in accordance with certain standards, or, as we say, by comparison or relatively. Here we might add as a fourth dimension, the individual capacity for enjoyment or for suffering.

Probably the thing which gives to the scientific mind the greatest pleasure is real work—work wherein the individual measures his mental powers not only against his competitors, but against previous standards set by himself. Happy is he who finds himself constantly placing his standards a little higher.

Much has been written about the value of the summer vacation, now about finished for most of us; but if this fails to bring us back to our work with a relatively greater zest and capacity, with higher standards and a clearer conception of our relativity to others, then indeed has it fallen short in some of its potential dimensions for us.—(R. P., Bulletin of the San Diego County Medical Society.)

ABSTRACTS FROM REPORTS TO AMERICAN MEDICAL ASSOCIATION HOUSE OF DELEGATES AT SAN FRANCISCO SESSION

(From Secretary West's Report)

Membership—On May 1, 1923, the membership of this Association, according to records in the office of the secretary, was 88,519, as compared with 89,048 on the corresponding date of the preceding year. The decrease to be noted is apparent, rather than actual and is to be accounted for by the removal of names from the roster which had been carried over for lack of specific instructions from State secretaries authorizing their removal.

Component Societies—There are 3047 counties in the United States. The 2049 component societies reported represent approximately 2400 counties, since in some instances the membership embraces physicians from two or more counties. In some of the 595 counties reported as unorganized, societies have become dormant after varying periods of organizational activity. * * * A great many component societies are broadening the scope of their work and rendering constantly increasing service for the improvement of their members and for the public welfare. These have regular meetings with well prepared scientific programs. Many of them have weekly or monthly bulletins. Diagnostic clinics and post-graduate courses of instruction appear to be gaining favor with some of the most active and progressive societies. * * * Some (county societies) are operating clinics in which the indigent receive treatment, medical or surgical, and to which those worthy are brought by lay organizations which assume the obligation of protecting the clinics against imposition.

Some county societies are providing newspapers with educational matter for their columns, this being published under the names of the societies. In all these ways, and in others too numerous to mention here, progressive county societies are striving for the improvement of their own members, and rendering public service for the honor and the benefit of scientific medicine.

Fellowship—In spite of the fact that more than 60 per cent of all members are Fellows, there is yet some misunderstanding and confusion with respect to "Membership" and "Fellowship." All members of constituent State medical associations are members of the American Medical Association, but those members who wish to become Fellows must make application, must subscribe for the Journal, and pay Fellowship dues for the current year, these dues and the subscription for the Journal being included in the one payment of \$6. It appears to be true that many members think they are Fellows when, as a matter of fact, they are not, because they have not made the required application. Only Fellows are eligible for participation in the work of the Scientific Assembly, for election as delegates, or for election as officers of the association.

Organization—The American Medical Association, with its nearly 90,000 members, is made up of more than fifty separate and largely independent organizations, each with its own peculiar problems and its own determining influences. In such a body it is oftentimes difficult, if not impossible, to determine where the weight of opinion lies with respect to any debatable question or procedure. It sometimes happens that when those upon whom administrative responsibility has been placed act to discharge what they conceive to be their duty in given premises, they receive as much of condemnation as of commendation. (One large group insists that an attitude of most aggressive opposition should be assumed toward all or toward certain cults and their programs, legislative and otherwise. Another group, just as large and altogether as representative, takes exactly the opposite position. One State association may demand what another definitely objects to.

(From the Report of the Board of Trustees)

Subscription Department—The Journal printed a weekly average of 80,862 copies during the year. * * * In twenty-seven of the States more than 50 per cent of the physicians are receiving the Journal. Minnesota shows the highest percentage, 69; North Dakota the next highest, 67; California, Connecticut, and Illinois, 65.

Advertising Department—A reference to the Auditor's report will show that the Advertising Department of the Journal earned during the year a little over \$600,000—\$31,421 more than in 1921. This earning exceeded the amount received from subscription and Fellowship dues, which was \$463,586.

Special Journals—A satisfactory report can be made regarding the five special Journals now being published by the Association. The circulation of the Archives of Internal Medicine for 1922 was 2526; of the American Journal of Diseases of Children, 2841; of the Archives of Neurology and Psychiatry, 1203; of the Archives of Dermatology and Syphilology, 1316; and of the Archives of Surgery, 2931.

American Medical Directory—The eighth edition of the American Medical Directory has been completed and will be in the hands of the subscribers before this session is held. Eight thousand five hundred copies have been printed.

Quarterly Cumulative Index—The Quarterly Cumulative Index is another of the publications issued by the Association solely in the interest of scientific medicine. The circulation for 1922 reached 1129, which must be regarded as entirely satisfactory.

Hygeia—An active campaign of promotion of Hygeia was begun among physicians in December and continued until about the middle of March. This promotion was in the form of advertisements in the Journal and through circulars. This campaign resulted in securing approximately 15,850 orders. About the middle of March, at the time the periodical appeared, a similar, active campaign was inaugurated among the public, appeals being made through circulars and personal letters to presidents of universities, State and county superintendents of schools, educational boards, women's clubs, teachers, etc. On the first of May, there were 19,500 subscribers, the majority being those who had accepted the special offer.

The Propaganda Department—The interest on the part of the public in the Journal's educational work on the nostrum evil, quackery and pseudo-medicine increases yearly. Especially does the public show an intelligent appreciation of the task which the American medical profession has assumed of warning the layman against the pitfalls of the nostrum vender, the cultist and the quack. * * * * The first issue of Hygeia has brought to the Propaganda department additional inquiries on the subject with which the department deals, and there is every reason to believe that as Hygeia becomes better known the department will be called on more heavily than ever before, for the attention of the public will be drawn to the fact that in the Propaganda department the public and the profession have a clearing house for information on the nostrum evil and quackery, and that the data it furnishes are both reliable and authoritative.

Council on Pharmacy and Chemistry and the Chemical Laboratory—During 1922, the Council and the Chemical Laboratory have continued their work in the interest of rational therapy. Each year finds an increasing number of physicians who are supporting this work, for the profession is realizing that the Council provides it with unbiased and dependable information concerning proprietary and new therapeutic agents. * * * * The pressing problems are the "mixed" vaccines, the pluriglandular preparations, products especially elaborated for intravenous therapy, and the attempts to commercialize our new knowledge of vitamins. The Coun-

cil continues to examine each "mixed" vaccine that is offered, but has accepted few of such mixtures. In spite of an extensive propaganda by certain firms which specialize in the manufacture of mixtures of endocrine substances, little, if any, scientific, controlled, clinical evidence has been presented to justify the almost ludicrous claims made by promoters.

(Report of the Council on Medical Education and Hospitals)

Progress of the Year in Medical Education—Since our report a year ago, the number of medical schools in the United States has decreased from eighty-three to eighty-one through the closing by the State universities of Michigan and Ohio of their separate homeopathic medical schools. It is interesting to note that the number of medical schools at the present time is just half the number that existed in 1906, when there were 162 colleges—the largest number—which was more than half of the world's supply and many more than were really needed in this country.

Medical Graduates—The class of 2529 students who graduated in 1922 was small because it was the "war class," made up of the few students who matriculated in 1918. The larger numbers enrolled in the three following years indicate that there will be approximately 3000 graduates this year, about 3800 in 1924, and about 4500 in 1925. The last figure mentioned will bring the annual output of physicians to about what it was in 1907, when there were 4980 graduates from the 159 medical schools. In 1907 there were only thirty-one graduates on the average from each college, while in 1925, according to our estimate, the eighty-one colleges will graduate approximately fifty-seven students each. At present, also, more than 90 per cent of all graduates possess higher qualifications in both preliminary and professional education, as compared with less than 10 per cent of those who graduated in 1907.

Present Numbers of Physicians and Hospitals—There are now 145,966 physicians in the United States, or 590 more than in 1921. There has been a decrease in the numbers of physicians in thirty-two States, but this decrease has been more than offset by the increases in seventeen States. The small increase in the two years is due partly to the small class—2529—graduating in 1922, the war class, consisting of the few who matriculated in 1918. The proportion of physicians to population is now one to every 724 people.

Survey of Group Clinics—An outstanding fact about the whole subject of group medicine is the loose way in which the terms "clinics," "groups," "diagnostic group," "group practice," "medical group," and a number of similar terms are ordinarily used. Out of a total of 270 groups that have been listed up to the present time, not more than 100 would answer to even a liberal definition of group medicine, and still fewer have been found to be actually correlating the services of specialists as a routine in the examination and treatment of patients. Many situations that are learned of as "groups" turn out to be simple business arrangements for the common use of a building, including the sharing of the waiting room, telephone, clerical assistance, nurses, laboratory, roentgen ray and other facilities not available to the independent practitioner.

Other Clinics and Dispensaries—The total number of individual patients in all the 3944 general and special dispensaries within a year is approximately 8,000,000, and the number of visits made by them is approximately 29,500,000 per year.

The survey brought out the fact that whereas the services of dispensaries were formerly almost entirely free, the idea of allowing the indigent to contribute a small amount has grown until fully 60 per cent of all the dispensaries of the country receive partial compensation from at least some of their patients.

THE PLIGHT OF THE FAMILY DOCTOR

(An interesting and profitable discussion by "A Physician" in the New York Times.)

This article is so timely and so well conceived and so well written that it is published in full in the Journal.

The prestige of the physician and surgeon is nowhere what it was at the beginning of the nineteenth century. The year 1900 was the surgeon's golden year from all standpoints. Medicine lacks the sensational cures, as for yellow fever, and the public, spoiled by wonderful medical success, has become more and more exacting. In the depths of its heart it bears a grudge against physicians because, notwithstanding the progress of science, people still die as our ancestors did in the Dark Ages. What the public wants is the physician's guarantee against death.

The New York State Department of Health reported in 1921 some 165 localities which had no doctor and that in 823 communities there was not a physician who had been out of college less than twenty-five years. Out of eighty-two applications for physicians from thriving villages and hamlets in New York, physicians were obtained for only half. The same situation exists in many other states. One town in New York raised a subsidy of \$2500 a year to keep its single physician. One of his nearest medical neighbors reported a drive of fifteen miles to cover a territory which a few years ago had several physicians. Many rural districts today lack medical service easily obtainable, of good quality and at a reasonable cost. The farmer needs a competent doctor within easy driving distance of his home and one who will give service for a fair compensation.

The effect of standardization of medical colleges and education, although it has produced better trained men, has reached the stage where it shows in a decreased number of graduates. Many medical colleges are limiting the number of their students so as to give better instruction. Most of the recent graduates in medicine are not willing to begin practice in the country but go to the cities. The tendency today is toward post-graduate study and then to go out as specialists, for this means a larger income with less work and without the irksomeness of a general practice. The specialist has regular office and hospital hours and is usually free from evening interference with his social life.

Between 1911 and 1919, in the rural districts of New York there was a falling off of 403 doctors, or 13.6 per cent, although the population had gained 7 per cent. City comforts and larger advantages attract the graduates of medical colleges to the cities, leaving the country deserted. The World War gathered many doctors into army and navy service and after their discharge the attractions of the city made them fail to return to the country.

Hospitals in the larger towns and cities do not take the place of a doctor for towns or rural communities. These places need resident physicians ready to care for minor emergencies, contagious and ordinary illnesses. The general practitioner, whether in the city or country, is the man who must continue to care for the majority of ordinary cases. The specialist and hospital cannot take his place. Inhabitants of rural districts do not want an elaborate system of bureaucratic state medical aid such as has been proposed. Both farmer and doctor will protest against any tendency which means paternalism.

A large proportion of the doctors in rural practice have been out of college not less than twenty-five years. This means that most of them obtained their education in the form of a high school course or less, with two or three years in a medical high school, an education much less expensive than that of today, and a start at least five years earlier in getting an income. To get a medical education today requires four years in an ordinary college,

four years more in a medical college, usually one or two years spent as interne in a hospital, and perhaps post-graduate study. After this comes the slow upbuilding of a practice.

Such an education has been estimated to cost \$2000 to \$2500 a year. Against this must be compared the income of men in other activities of life who begin earning immediately after leaving the high school or college. Figuring the above and counting interest, by the time a physician is really on his feet with an income in excess of his expenses, he has an investment of from \$30,000 to \$40,000. This means an interest charge of about \$2000 a year. Besides the requirements of the medical college for a degree in medicine, the addition of a year as interne in a hospital, a fifth year is coming to the front as an essential for the degree of doctor of medicine or as a license to practice. Ten medical colleges and ten state licensing boards require this today.

As hospitals and medical colleges have come more and more under the control of non-medical men and lay organizations there apparently is a movement to lengthen the time required to obtain a degree of doctor of medicine and to increase the amount of ultra-scientific education required for a diploma. Another coming step in medical education is to limit the freedom and prestige of the legally licensed physician to practice the various branches of medicine and surgery under the plea that to properly train himself as a specialist a physician must have an additional and special training. Perhaps here lies concealed the cunning hand of the present groups of specialists to limit competition, helped by those who strive for the last iota of possible education.

In former days the specialist was developed from the general practitioner group by the natural process of experience along special lines, aided by periods of post-graduate work. No training is as desirable for the future specialist as a few years' work in general practice. This the up-to-date medical graduate who goes direct into post-graduate study and a specialty does not receive, and it weakens his general grasp and outlook. It makes his viewpoint narrow. Special committees, largely under the influence of specialists, are now studying the needs of the various specialties in order to suggest minimum courses of post-graduate instruction which physicians will be expected or required to take before they can be classed as specialists. This probably will mean from one to three years of post-graduate study. The graduate school of the University of Pennsylvania now offers regular medical courses of one to three years' duration for "appropriate certificates" or "graduate medical degrees" in some seventeen specialties. Of course, this is after a man has studied for and taken his M. D. degree.

The following advertisement in an August, 1922, medical journal gives an idea of what industry is willing to pay for medical service:

"Wanted at once, resident physician for an industrial plant. First aid, physical examinations, etc.; \$250 per month, without maintenance. Eight hours' service. Private practice permitted off time. N. Y. State."

Eight hours' service and private practice permitted are an impossibility and absurd. The \$3000 per year this advertisement offers is a fair example of the remuneration industrial surgeons receive. Public health and school physicians receive about the same, running from \$2000 to \$3500, rarely more.

The elimination of disease, the first duty of a doctor and of the greatest good to humanity, is cutting down the scope of the work of the general practitioner, whether in city or country life, and the agitator and the propagandist have found in the field of medicine plenty of room to ply their arts. They have gone so far as to make some of the public believe that socialism in the medical field would

bring higher standards. This creates a perilous situation, for, with the initiative and individuality of the physician removed, men of character, ability and energy would fail to enter the profession, and these are the type of men who keep medicine in the front rank of science. Free health service sounds well, but it is economically wrong. Although the public needs protection, it needs education even more.

Prevention of disease is a natural function of government, but free state health service should not be expected by those who can afford to pay. At no time have physicians neglected the needy poor; those deserving it can always receive the best of medical care without expense to themselves from the individual physician, the dispensary or the hospital.

In a certain city in this country a large number of health centers have been established under the auspices of the board of health. A large number of the physicians in that city are serving in those centers either in a part or full-time basis. Full-time doctors receive from \$1500 to \$300. The urological department is a fair example. In this department free treatment is advertised for man or woman, without distinction between those who can afford to pay and those who need charity. One of the physicians connected with this department, on a part-time basis with a salary of \$760 a year, saw from fifty to seventy patients in a two-hour period three times a week. This is a factory type of quantity production with no individuality of treatment. The taxpayers pay the bills, the patients receive only mediocre treatment, and the individual physician is driven to the wall.

State health insurance is a serious menace to the medical profession today. It means classifying those who earn less than a certain amount into groups and having the state (the taxpayers) pay the physicians small amounts to care for the groups. The social uplifters are using all possible means to bring this about, not looking forward to the ultimate result. Many physicians believe that compulsory health insurance will be ruinous to medicine and reduce the doctor to the cheapest paid and most degrading contract worker in all the professions.

In eight states bills have been introduced to compel physicians to furnish medical care at twenty-five cents to fifty cents a call for about one-fourth of the population employed in our industries. This idea is being pushed by charity workers, public health agencies and officials and others interested in philanthropic work of the social uplift type. It would result in one of the greatest bureaucracies, bring medicine under the politicians' control, and ultimately require a large amount of the taxpayers' money. It would tend to pauperize the laboring class. Labor is worthy of a wage large enough to allow employment of a doctor of its own choice. Physicians practicing among the laboring classes on an independent basis would be driven from the field. The patient probably would not be allowed to choose his own physician.

Companion bills, apparently from the same source, have been introduced into many state legislatures requiring physicians to be relicensed each year, perhaps re-examined, and where a physician was not willing to do the bidding of the social uplifters in state insurance practice his license or right to practice might be taken from him.

For nine years England has had national or state health insurance. It is still an experiment there; it is proving costly and by no means universally satisfactory. Public health conditions have not improved, and there is talk of repealing the act.

Bureau says is said to be the only form of government for which the philosopher can find no defense. The president of the Michigan State Medical Society predicts that in a short time department stores will install medical departments to furnish treatment for the sick at cut rates so as to attract customers and stimulate the sale of mer-

chandise. Department stores now maintain drug and prescription departments. Medical departments are only the next step in evolution. Already they have optical sections, with hired oculists.

In discussing nursing, the president of the Connecticut State Medical Society reports that the graduate nurse of today is on a different plane from those of a quarter of a century ago. He states that the three-year course of training required for a nurse, added to the demand that the pupil shall have a four-year high school preparation, results in an overtrained individual so far as nursing is concerned. He says that the very term, "graduate nurse," is fast becoming a misnomer, for these nurses either marry or become visiting, school, or district nurses, technicians or attendants in physicians' offices, positions which only by a very broad interpretation can be construed as nursing under the usual significance of that term.

The trained nurses of today have ambitions far beyond their original sphere of caring for the sick in homes or hospitals under the direction of a physician. They desire to develop into some form of expert, such as nurse anesthetist, technician, instructor of nursing, school nurse, factory nurse, office assistant, child welfare workers and other positions in the field of public health work under civic and social agencies. In practically all these lines they become more or less independent of and direct competitors with the general medical practitioners. The number of nurses so engaged was estimated in 1921 as more than 10,000, and increasing fast. The work of these nurses today includes much which a few years ago was entirely in the field of the doctor.

Society through legislative action has assumed its natural right of regulation as to who shall practice medicine by stating the qualifications therefor. Legally speaking, this is part of the regulations that modern society has evolved for its own protection to safeguard the public from incompetent and unscrupulous persons. Practically, however, the medical practice laws in the various states largely have been secured at a great expense of time and labor on the part of physicians. The public seems to have very little interest in these laws, believing that they are for the benefit of physicians. These laws do not deter the faker or the charlatan, and they do not prevent any new sect which may spring up from overriding their provisions. Enforcement of these laws has been left to physicians in great degree, usually acting through their medical societies. In actual practice this was proved most unsatisfactory. It is nobody's business to start action, and in most instances the law is rarely enforced against offenders.

It would seem as though the lack of rural doctors was only the beginning. The tendency today is for the medical graduate to go into a specialty, as this means an easier life and greater rewards. The grinding down of the general practitioner by the various means indicated is steadily increasing, and I venture to prophesy that it will not be long before there will be a shortage of general practitioners in the cities.

Is the practice of medicine worth while? This was the subject of discussion at a recent meeting of the Pennsylvania State Medical Society. The answer given by one physician was as follows: "If your ideals in life are money, ease, fame, the praise of your fellowmen, if you want to have a good time, if you want to be in society, if you want to marry a woman and make her happy instead of uncomfortable and miserable, keep out of medicine. You cannot have a home without some real woman, but as a physician's wife she must go through life without the silks, satins and furs of other women, must be deprived of social life and the many things that are attractive to her. The practice of medicine requires labor, self-sacrifice, self-denial and everything of that kind, together with much abuse."

THE ABUSE OF CHARITY WORK

The following circular letter has been sent to all members of the Hennepin County Medical Society, which includes practically all the physicians in Minneapolis:

The Public Health and Hospital Committee of the Hennepin County Medical Society is anxious to receive specific complaints from members of the society of violations of the rules of the various clinics and charitable organizations of the city by people who can afford to pay for medical service.

We feel that when the members of the medical profession do the work in all of these agencies, and, in addition, 40 per cent (roughly estimated) of their private practice is without compensation, those who can afford to pay should do so.

We hear constantly complaints of excessive doctors' fees. Possibly the use of free clinics by a large number who could afford to pay at least a small fee may to some extent be responsible for this condition.

We are anxious to get some definite data on this question, and would appreciate concrete information in regard to specific instances of violations of this kind and also of attempts on the part of social workers to lead people away from their own physicians to free clinics.

(Of course, it is understood that this information shall be entirely confidential.—Editorial in *The Journal-Lancet*, April 1, 1923.)

Congress and Health Legislation—During the four sessions of Congress from April 11, 1921, to March 4, 1923, over 21,000 bills and resolutions were introduced in both branches; 16,700 in the House and 5,419 in the Senate. Of these, about 350 bills and resolutions are of direct interest to physicians. In other words, only 1.6 per cent of the measures before Congress have dealt with public health. Nine hundred and thirty-one laws, of which 655 were public and 276 of private character, were placed on the statute books during the Sixty-seventh Congress. Only thirty-one of these, or 3.3 per cent, have a direct bearing on public health. The health bills which passed include, among others, the following public laws and public resolutions:

Health Laws Passed

No. 47. Veterans' Bureau created. August 9, 1921. (H. R. 6611.)

No. 51. Packers Act. Regulating interstate and foreign commerce in livestock and dairy products. (H. R. 6320.)

No. 74. Cincinnati Health Exposition, cancellation stamp for. October 10, 1921. (H. R. 8365.)

No. 78. Veterans in Hospitals, tobacco for. October 14, 1921. (S. 1718.)

No. 96. Anti-Beer Act, supplement to national prohibition law. November 23, 1921. (H. R. 7294.)

No. 97. Maternity and Infancy, promotion of welfare of (Sheppard-Towner law). November 23, 1921. (S. 1039.)

No. 110. Searcy hospital for colored insane in Alabama, land for. (H. R. 6961), November 5, 1921.

No. 125. Water supply for Fort Monroe. (H. R. 7204.)

No. 129. Medical and surgical supplies transferred by Army to Russian relief (S. 2708), January 19, 1922.

No. 194, No. 216, and No. 273. Hospitals for veterans. (H. R. 10,864, H. R. 11,547, H. R. 11,588, respectively), April 14, 1922; May, 1922; July 1, 1922.

No. 227. Narcotics prohibited from importation

or exportation except for medicinal purposes. (H. R. 2193), May 26, 1922.

No. 225. Pay of Army, Navy, Public Health Service, etc. (H. R. 10,972), June 7, 1922.

No. 318. Tariff Act. (H. R. 7456), September 21, 1922.

No. 330. Leprosy station in Hawaii. (H. R. 11,589), June 19, 1922.

No. 347. Coal Commission. (H. R. 12,377.)

No. 352. Fees, surgeons of Pension Bureau. (S. 3540), September 22, 1922.

No. 430. Federal Leprosarium, additional buildings for. February, 1923. (S. 3721.)

No. 460. War Risk Insurance, amendment concerning. March 2, 1923. (H. R. 10,003.)

No. 463. Hospital in Arkansas, transfer. March 2, 1923. (H. R. 12,751.)

No. 472. Sewage drain at Miami, Florida. March 2, 1923. (H. R. 13,272.)

No. 513. Filled milk, prohibition of in interstate commerce. March 3, 1923. (H. R. 8086.)

No. 516. Reclassification of Government positions and salaries. March 3, 1923. (H. R. 8928.)

No. 542. War Risk Insurance, amendment concerning. March 3, 1923. (H. R. 14,401.)

No. 519. Butter, standard for. March 3, 1923. (H. R. 12,052.)

No. 536. Compensation for injured government employees. March 3, 1923. (H. R. 14,222.)

Public Resolutions

No. 63. Disposal of articles produced by patients of Veterans' Bureau. (H. J. Res. 313.)

No. 65. Pollution of Navigable Waters convention. (H. J. Res. 297), August, 1922.

No. 75. Water supply of Kansas City, Missouri and Kansas. (S. J. Res. 216.)

No. 96. Narcotic control, international co-operation in. March 2, 1923. (H. J. Res. 453.)

In looking over these thirty-one laws, it will be noted that a dozen or so are of considerable importance to national health. These include the acts for creating the Veterans' Bureau and the hospitalization of veterans, the maternity and infancy law, the anti-beer measure, the laws relating to narcotics, increase of pay for the Public Health Service, reclassification of government salaries, the tariff, the act increasing facilities at the Federal Leprosarium, and the filled milk law. There is, of course, some difference of opinion regarding a few of these laws, such as the Maternity Act and the filled milk law, but these dozen measures mentioned are the ones which will influence public health.

Health Bills Not Passed

Since only thirty-one health bills became laws, about 320 failed of passage. Many of these were minor measures and some of them "freak" ones, and a large number never got out of committee. Among the more important health bills which did not pass may be mentioned: The resolutions to amend the Constitution relative to restriction of child labor; transfer of the activities of the Interdepartmental Social Hygiene Board to the Department of Justice; the Fess-Capper bill for Federal aid to physical education; commissions for sanitary engineers in the U. S. Public Health Service; reorganization of the U. S. Public Health Service; the uniform marriage and divorce bill; sale of Marine Hospital at Detroit; a number of bills relating to tuberculosis; and a couple of anti-vivisection measures. The District of Columbia, for which Congress legislates, fared particularly badly with respect to health measures. Bills to regulate milk, venereal diseases, optometry, and child welfare were not acted upon.

ADVERTISING—DIRECT AND INDIRECT

The obligation assumed on entering the profession requires the physician to comport himself as a gentleman and demands that he use every honorable means to uphold the dignity and honor of his vocation, exalt its standards and extend its sphere of usefulness.

Though not included within quotation marks, the foregoing is the opening sentence of Section 1, Chapter II, of the Principles of Medical Ethics, the chapter devoted to "The Duties of Physicians to Each Other and to the Profession at Large." Section 4 of the same chapter reads thus:

Advertising

"Solicitation of patients by physicians as individuals, or collectively in groups by whatever name these be called, or by institutions or organizations, whether by circulars or advertisements, or by personal communications, is unprofessional. This does not prohibit ethical institutions from legitimate advertisement of location, physical surroundings and special class—if any—of patients accommodated. It is equally unprofessional to procure patients by indirection through solicitors or agents of any kind, or by indirect advertisement, or by furnishing or inspiring newspaper or magazine comments concerning cases in which the physician has been or is concerned. All other like self laudations defy the traditions and lower the tone of any profession and so are intolerable. The most worthy and effective advertisement possible, even for a young physician, and especially with his brother physicians, is the establishment of a well-merited reputation for professional ability and fidelity. This cannot be forced, but must be the outcome of character and conduct. The publication or circulation of ordinary simple business cards, being a matter of personal taste, or local custom, and sometimes of convenience, is not per se improper. As implied, it is unprofessional to disregard local customs and offend recognized ideals in publishing or circulating such cards.

"It is unprofessional to promise radical cures; to boast of cures and secret methods of treatment or remedies; to exhibit certificates of skill or success in the treatment of diseases or to employ any methods to rain the attention of the public for the purpose of obtaining patients."

That there is a growing tendency upon the part of some physicians, as individuals and as groups, to avail themselves of the possible beneficial results of a free use of printer's ink judiciously spread on letter heads, cards, circulars, the pages of newspapers and the columns of popular magazines, seems to be evidenced by the number of letters coming to the offices of the American Medical Association, from practically all parts of the country, with copies of the aforementioned letter heads, cards and circulars, or with clippings from newspapers and magazines attached. Some of the letter heads and cards are altogether unobjectionable, others are impossible. None of the circulars are permissible under the principles of medical ethics. The newspaper clippings are varied in character—some of them are absolutely without character. The same may be said of the clippings from magazines.

It is inevitable that a successful physician, whether in hamlet or populous center, will occasionally find his name and his deeds heralded in a newspaper. Of course, the greater his fame and prestige, the greater the chance that he will be "published." By far the greater number of newspaper items about physicians and their work appear without the connivance and without the knowledge of the physicians concerned. But when these items appear one week after another in the weekly newspaper, there is a basis for suspicion, to say the least. When they appear with the

picture of the subject of comment conspicuously displayed in the middle of the article, then there is basis for more than suspicion, though it sometimes happens that even the appearance of the beaming features of the gentleman written about does not mean that he has connived. Some of the ablest physicians have been unwilling and mortified victims of journalistic enterprise.

Of late months, newspaper articles, some of them occupying entire pages, have appeared telling all about this, that or the other clinic or group. Some of these are obviously not inspired, but are the evidence of a desire upon the part of the newspapers to glorify the advantages enjoyed by the communities these papers serve. Others of these articles present such complete details about men, methods and organizations or institutions that it is hard to escape the conclusion that somebody on the inside took time to particularize for the benefit of the writers. Some one has said that the formation of groups has a very peculiar influence upon the members thereof. A very easy way to determine whether or not a statement to appear in a newspaper about a group of men working together will come within the limit of proprieties established by the principles of medical ethics is to substitute the name of a single physician for the name of the group wherever it appears. Let us try it here: "The Winnitario Clinic, composed of the most capable physicians and surgeons in Winnitario, is prepared to render better service to the people of this territory than can be secured this side of Newdelphia." Make it read: "Dr. John Doe, the best physician and surgeon in Winnitario, is prepared to render better service to the people of this territory than they can secure from any other physician and surgeon this side of Newdelphia." How does that sound?

It is neither charitable nor fair to suspect every physician or every group that are made the subject of comment in newspapers of connivance in the preparation and publication of such comment. The would-be advertiser does not "uphold the dignity and honor of the profession, nor exalt its standards, nor strive to extend its sphere of usefulness" in keeping with the obligation assumed by one who enters the medical profession. His activities should receive the attention of the board of censors of the county medical society to which he belongs. —American Medical Association Bulletin, May, 1923.

The Private Practitioner and the Nurse from the Private Health Organization—Several private practitioners have recently stated to officials of this department that the public health nurses employed in their districts by private health or nursing organizations in going into the homes of their patients are in the habit of changing instructions in feeding and in other ways prescribing for the various members of the family.

"What can we do about it?" say these physicians. "The organizations which employ them must show what these nurses have accomplished in order to get the financial support to continue the work. If we complain, it is believed that the basis of our complaint is that we are afraid we will lose fees through such gratuitous advice. As a fact we may be treating the family at a most nominal charge or without charge, and the real help we could and should give such family is nullified because the family follows the advice of the nursing service, which is free, and discounts its real need of medical care. In many instances these nurses foster the idea that a good nurse is worth more than a physician. They entirely overlook the fact that a good nurse and a physician working together in their proper relations get better results than either alone can get. Because of this state of affairs we are not in favor of public health nurses"—New York Health News.

THE COURTS AND PUBLIC HEALTH

These abstracts from the news sheets of the National Health Council are considered of interest to our members:

"It may be said that law is of two kinds—the written, embodying the expressed will of the legislative branch, and the unwritten, consisting mainly of the decisions of courts of last resort, which interpret and apply the written law. Since there are forty-eight State supreme courts or courts of appeals, principles of law vary considerably throughout the United States, though they are probably more in harmony on public health matters than many others. Decisions of the highest court of a State are binding on that State, and in the absence of decision in a similar case in another State, may be a precedent for the latter State court. The United States Supreme Court deals with matters arising under the Federal Constitution, which may have been appealed from State or lower Federal courts. In a few cases it has original jurisdiction, as in controversies between States.

The Federal Maternity and Infancy Act is before the U. S. Supreme Court. The petition of the commonwealth of Massachusetts to bring suit against Federal officials who administer the Maternity and Infancy Act (Sheppard-Towner law) as outlined in Statement No. 34, page 1, was granted by the U. S. Supreme Court on October 23, 1922. The return has been set for January 2, 1923, before which time the complaint must be answered. Future developments in this case will be followed in these reports. Copies of the reprint entitled "The Constitutionality of the Federal Maternity and Infancy Act," setting forth impartially both sides of the argument, may be obtained from the Washington office of the council.

Vaccination Regulation Upheld (Washington)

State ex rel. Lehman vs. Partlow et al., 205 Pac. 420. March 28, 1922. Facts. In accordance with instruction from the State Director of Health, the school authorities of Thurston County ordered all unvaccinated children to be vaccinated. Lehman refused to permit his daughter to be vaccinated. The facts were undisputed, as the case was argued on a demurrer, which was overruled in the lower court and appealed to the Supreme Court.

Holdings—The Supreme Court upheld the vaccination requirement as within the authority conferred by the statute on the State Director of Health.

Comment—Courts have quite generally upheld vaccination. In January, 1922, the Superior Court of Cook County, Ill., held that damages could not be recovered against the health commissioner for excluding unvaccinated children from school. This case, while interesting, is not an authority, as not coming from the highest court in the State.

Venereal Diseases

Two recent cases have dealt with this subject, though with somewhat conflicting results. In *ex parte Caselli*, 204 Pac. 364, a Montana case decided January 24, 1922, a woman affected with gonorrhea was held by the sheriff under an order of the health officer of the city of Missoula. She applied for a writ of habeas corpus (see No. 6 below) on the ground that she was not granted a judicial hearing before being detained. The court upheld her detention on the ground that it was justified under the police power.

In *Rock vs. Corney et al.*, 185 N. W. 798, a Michigan case decided December 21, 1921, a girl was examined, found to have gonorrhea and was placed in a hospital, the inspector of the State Board of Health refusing to permit her to be quarantined at home. The court held that this was an unlawful use of authority and the question whether

the refusal to quarantine her at home was unreasonable or not should have been presented as an issue of fact for the jury. The judgment was reversed in favor of the girl.

Habeas Corpus and Quarantine

Habeas corpus is a writ which inquires into the restraint of any person. When granted, the person detained is brought into court at once and given an opportunity to show why he should be released. In a number of recent cases it has been brought out that this is the proper procedure for a quarantined person who believes his detention is illegal. This point was particularly developed and sustained in *ex parte Caselli* cited above, and other cases.

Ascertaining the Splenic Index and the Mosquito

Focus from Schoolchildren—Samuel T. Darling, Baltimore (Journal A. M. A., March 17, 1923), emphasizes that schoolchildren can be utilized by the epidemiologist and the health officer not only in estimating the amount of malaria in a community, but also, at times, in revealing the source of the anophelines responsible for their infection. In rural communities where malaria exists, the school should furnish an index of the amount of malaria present, because of the well known frequency of splenic enlargement in children in an endemic or epidemic region, and because the children are representative of the exposed group, temporarily segregated and readily accessible to the epidemiologist or to those interested in malaria control. In malarial infection there is a correspondence in time between the appearance of malarial plasmodia, the occurrence of fever, and the enlargement of the spleen. This takes place in new infections, in reinfections and in relapse. The splenic enlargement persists for some time after the subsidence of fever. In a few instances, malaria infection is not associated with splenic enlargement, as in some cases of acute and fatal pernicious malaria and in cases of superinfection. It is also true that, wherever malaria has caused splenic enlargement, the clinical history is usually sufficiently definite to permit the making of a diagnosis from the latter. Many epidemiologists, however, would welcome a method which would elicit information without the necessity of relying on the testimony of ignorant, overzealous or inco-operative persons. Darling reports the results of a survey of a Brazilian village. Sixty-six of 150 children had an enlarged spleen. In most instances the spleen was not greatly enlarged, being "palpable" or "one finger's breadth" in size. Blood specimens were not taken from every child, but only from representative age and sex groups. Half the children from whom blood specimens were taken had positive spleens. The plasmodium was nearly always that of tertian malaria. Of the fifty-seven children who lived in the lower half of the town toward the river, forty-two, or 73.7 per cent, had palpable spleens, while of the ninety-three children who lived in the upper part of the town and beyond, only twenty-four, or 25.8 per cent, had palpable spleens. This pointed unmistakably to the river margin as the principal if not the sole focus of the malaria in the locality, and it appeared to eliminate the stream which ran through the village, as well as any possible place farther away from the river, as being of any real importance in contributing to the malaria of the community. Many propagation areas were found in the low places between the river and the town, along the flood plain and in the borrow-pits and ditches near the tile works. Here larvae of *Anopheles argyritarsis*, *A. tarsimaculata* and *A. albimanus*, well known carriers of malaria, were found in great abundance. Fewer were found across the river. The larval survey confirmed the indications obtained from spleen examinations, since the propagation areas were found to coincide with the areas near the homes of the malaria-infected children.

SOUTHERN CALIFORNIA MEDICAL SOCIETY

By Egerton Crispin, M. D., Secretary

The sixty-ninth semi-annual meeting of the Southern California Medical Society will be held in Los Angeles on the second and third of November, under the presidency of Robert Pollock of San Diego.

Among the speakers for the coming meeting are Frank Porter Miller of Los Angeles, who will present his conclusions of a series of studies on the "Carbondioxide Combining Power of Blood Plasma in Pulmonary Tuberculosis." John Bacon, for many years chief surgeon of the Miami Inspiration Copper interests, will discuss "Industrial Surgery in the Southwest," presenting some new phases in the executive management of this growing problem. A. H. Galvin of the Johnston-Wickett Clinic, Anaheim, will present "Some Causes and Methods of Treatment of Backache." Maurice Kahn will present his observations and the "Technique of Surgical Relief for Endarteritis Obliterans." Holland G. Hambleton, who has had a large experience at Ancon Hospital handling infections of the bowel, will discuss "The Recognition and Methods of Treatment of Pathologic Types of Amebiasis." Edwin Chamberlain of San Diego has a paper on "The Importance of Early Diagnosis in Tumors of the Urinary Bladder." Charles L. Lowman will use lantern slides to demonstrate "The Rationale and Technique of Surgical Treatment of Flat Feet." Guy Cochran will discuss "Hypertrophic Pyloric Stenosis in Infants," and surgical procedures for its relief. Elmer Belt, who for some years has been doing experimental work on Renal Circulation, will use lantern slides to show "The Results of Some Experimental Work on Renal Circulation and Its Surgical Value as Applied to Nephrotomy." Nelson Janney will use lantern slides to show an interesting series of "Orthopedic Deformities in Endocrine Diseases." Hans Lissner of San Francisco, chief of the Endocrine Clinic of the University of California Medical School and assistant clinical professor of medicine, will give a lantern slide clinic of curious people with whom he has to deal, showing "Types of Ductless Gland Diseases." Bernard Smith and Howard West will present a series of "Studies in the Use of Insulin." Carl Rand will use lantern slides to demonstrate "Studies on Spinal Tumors," in which there has been surgical intervention. Herbert Evans, Professor of Anatomy at the University of California, will present, illustrated by lantern slides and charts, experimental work demonstrating "The Hormone of the Anterior Hypophysis."

In addition to the above speakers, there will be many others of prominence in the medical profession and an interesting Saturday evening address on the broader problems of medicine and the profession by one of the able and well known educators of California.

San Francisco Journal Rebuked—The following letter, written by Thomas W. Huntington, chief surgeon of the Western Pacific Railroad Company, will, it is felt, express the sentiment of our members:

"San Francisco, Cal., Sept. 21, 1923.

"Andrew M. Lawrence, Esq., Editor The San Francisco Journal, San Francisco, California.

"Dear Mr. Lawrence—From a purely personal angle, permit me earnestly to protest the recent publication in your columns of an article from Pearson's Magazine. Without proof or warrant, said article unqualifiedly condemned the medical treatment of our late lamented President during his last illness, and viciously assailed the character and judgment of those to whom was assigned the grave responsibility of his care. This assault, lacking evidence or justification, was manifestly inspired by a desire to discredit and humiliate a body of men

whose repute in scientific medicine is above reproach.

"As a subscriber to The Journal from its inception, and voicing expressions from many high-minded men of my profession, this incident is a sad disappointment. After reasonable reflection we fail to understand the motive which prompted dissemination of matter which scientifically and ethically is without semblance of credibility. Medical men universally court helpful constructive criticism. Baseless misstatements we resent. Yours truly,

"T. W. Huntington.

"978 Mills Building, San Francisco, Cal."

NEW MEMBERS

Oakland—S. S. Yamada, John R. Gray, Colin R. McKenzie, Hector D. McKenzie.

San Francisco—Robert C. Martin, Dwight E. Shepardson, Frederick P. Shafer, Edward M. Talbott.

Lassen—Plumas County—Clyde E. Watson.

TRANSFERRED

Fletcher B. Taylor, from San Francisco county to Alameda county.

Christopher Leggo, from San Francisco county to Alameda county.

Richard F. Mogan, from San Francisco county to Los Angeles county.

A. E. Belt, from San Francisco county to Los Angeles county.

W. A. Perkins, from San Francisco county to Alameda county.

David Divanovich, from Fresno county to San Francisco county.

A. H. Moore, from San Francisco county to Los Angeles county.

DEATHS

Doyle, Olline Burton. Died at Fresno, August 28, 1923, age 48. Graduate of the Kentucky School of Medicine, Louisville, 1898. Licensed in California in 1898. He was a member of the Fresno County Medical Society, the California Medical Association and the American Medical Association.

Gould, Elisha Tolman. Died at Sonora, September 9, 1923, age 67. Graduate of the Bowdoin Medical School, Portland, Maine, 1880. Licensed in California in 1882. He was a member of the Tuolumne County Medical Society, the California Medical Association and the American Medical Association.

Mackerras, Robert Hamilton. Died at Pasadena, August 17, 1923, age 45. Graduate of Queens University, Kingston, Canada, 1903. Licensed in California in 1905. He was a member of the Los Angeles County Medical Society, the California Medical Association and the American Medical Association.

Magee, Allyn Claude. Died at Los Angeles, August 11, 1923, age 46. Graduate of the Physicians' and Surgeons' College of Los Angeles, taking a post-graduate course at Mayo Brothers. He was a member of the Los Angeles County Medical Society, the California Medical Association and the American Medical Association.

Manger, Charles Christian. Died at Los Angeles, August 22, 1923, age 52. Graduate of the Medico-Chirurgical College of Philadelphia, 1906. Licensed in California in 1911. He was a member of the Los Angeles County Medical Society, the California Medical Association and the American Medical Association.

California State Journal of Medicine

OWNED AND PUBLISHED MONTHLY BY THE CALIFORNIA MEDICAL ASSOCIATION

BALBOA BUILDING, SECOND AND MARKET STREETS, SAN FRANCISCO

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VOL. XXI

NOVEMBER, 1923

No. 11

ORIGINAL ARTICLES

RESPONSIBILITY FOR STATEMENTS AND CONCLUSIONS IN ORIGINAL ARTICLES

The author of an article appearing in the JOURNAL is entirely responsible for all statements and conclusions. These may or may not be in harmony with the views of the editorial staff. Furthermore, authors are largely responsible for the language and method of presenting their subjects. All manuscripts will be carefully read, but editorial privileges will be exercised only to a very limited extent. It is believed that the manner of presentation of any subject by any author determines to no small degree the value of his conclusions. Therefore, both the author and the reader, in our opinion, are entitled to have the subject as presented by the author as little disturbed as possible by the editors. However, the right to reduce or reject any article is always reserved.

THE BIRTH RATE: A FACTOR IN NATIONAL WELFARE*

By LUDWIG A. EMGE, M. D.

(From the Department of Obstetrics and Gynecology, Stanford University, School of Medicine.)

It is not within the scope of this address to present to you statistics on birth and death rates with their bewildering maze of figures so confusing to the uninitiated. Its purpose is to point out to you certain basic factors that influence the birth rate in this country, which is of such importance to the welfare of this nation.

The average citizen knows little and often cares less about the growth of the nation. He is satisfied to find out through the censors that the population has increased, but he does not take the trouble to inform himself as to the source of supply which produced this increase. A few of our magazine writers have from time to time sounded a warning in regard to the insufficient number of births as compared to the number of deaths in this country. Although many individuals are reached by these publications, it is doubtful to my mind how far this information has penetrated into the population at large.

It requires the efforts of certain bodies of men and women to take upon themselves the burden of

missionary work in this field of mass education. The physician, for one, is especially fitted to take upon himself or herself the task to preach a gospel of a sane sexual life in regard to copulation and conception. This missionary work, when interwoven with the daily practice of medicine, must ultimately lead to a better information of all classes in regard to fertility and fecundity of the nation. This mission must reach young and old, single and married, until the population has realized to the fullest extent that a good average birth rate determines the maintenance of the race, while a declining birth rate ultimately leads to the decadence of the race, regardless of its accumulated wealth and its achievements.

The fact is that our birth rate is at a standstill and too low as compared to the death rate. There are a number of factors which have brought on this condition which are not generally appreciated, and I dare say are not even sufficiently realized by our own profession. I shall attempt to briefly point out to you some of the principal factors involved.

It has been said that an increase in the general intelligence of a nation leads to a decrease in birth rate. This is an assumption and not a fact. I only point to Russia. As long as the intelligent classes ruled, even if we do not approve their methods of government, Russia's economic status before the revolution was such that the average family could afford and was willing to produce children in excess of the death rate. It is unnecessary to point out to you what happened when the intelligent classes were destroyed. The dreadful result is only too well known to all of us.

Intelligence, in a general sense, rather favors fertility, although it may to some degree depress fecundity. This is best observed in academic communities where the number of children is most often two and seldom more than three to each family. While on the surface this would indicate that intelligence is interfering with normal production, this factor is offset by a lesser number of childless marriages and a lower infant death rate. Furthermore, here we have to deal with an offspring which is better physically and mentally fit to withstand disease and the reverses of life.

Although the poorer and less intelligent classes are faster breeders in general, it must not be forgotten that the infant and children's death rate is considerably higher and increases in a direct ratio to the total number of children for every family. Emma Duke cites an increase of death rate from 108.5 per 1000 in two-children families to 176.4

* Chairman's address at the meeting of the Section on Obstetrics and Gynecology, at the Fifty-Second Annual Session of the California Medical Association, San Francisco, June, 1923.

per 1000 in seven to eight-children families. Alice Hamilton's figures for one of Chicago's poor districts are even higher. Here, the death rate per 1000 rises from 118 for four-children families to 291 for eight-children families. Naturally, lower intelligence goes here hand in hand with economic want, and it is the combined influence that causes the enormous loss of life among the children of the poor.

Let us pause for a moment and quickly survey the present situation in this country as regards births and deaths.

Above all, there is a decided drop in fecundity of our native women. Foreign women are generally very fruitful. Only one in twenty is infertile as compared to our native white women of whom one in eight is childless. I quote Stone, who stated, in 1916, that residence reduces fertility. He points out that the fertility of the second generation is reduced from 6.5 per cent to 5.3 per cent, while in native white women, with both parents born in this country, infertility had reached 13.1 per cent (1916). This reduction in fertility and fecundity is the result of our living standards and by no means the result of poverty.

I make this latter statement because I believe that the control of the birth rate lies entirely in the hands of our people. Undeniable is the fact that relative sterility, by which I mean the wilful prevention of fertilization, is becoming more and more prevalent among all classes. This is the age of excitement, of new philosophies of life such as single moral standards and of female emancipation. It has created a greater demand by all classes for luxuries of life. It has produced a generation which thoughtlessly and selfishly disregards the duty of married life of producing a reasonable number of children not always for want of economic necessities, but in order to satisfy the ever-growing desire for the excitements of this age of speed and greed. Gibbons called it "the gospel of comfort" which has a firm hold on our people and which must be considered as one of the most important factors that has led to a stationary birth rate without in the least influencing the death rate.

Proof for this statement may be found in foreign and native statistics. If economic want alone would be the chief reason, the poorer classes should certainly have the lowest birth rates. In fact, the reverse is true. It is the middle class that makes the poorer showing.

It was Bertillon who pointed out that the annual birth rate between the ages of 15 and 50 for Paris, Berlin, Vienna, and London was much higher in the poor than in the rich quarters, showing an average of seventy points in favor of the poor quarters. English statistics prove that the birth rate falls as the income increases. In days gone by, the average fertility of a woman was estimated at ten conceptions by Matthews Duncan. Even if this figure is cut in half today, it is still two to three points above the average fecundity of all women of this country. In the registration area we had in 1920, 3.3 as the total average number of children ever born for each family, with 2.9 total number of living children. In California in the same year, 2.7 was the total average number of

children for each family ever born, with 2.4 as the total number of children living.

In 1920 only 68.5 births were registered per 1000 female population for the entire registration area, while in California only 56.5 births were registered per 1000 female population. In the total registration area, as well as in California, the colored female population other than negroes showed a rate from two to four times higher than that of white women. I do not wish to be an alarmist, but if this colored population will multiply this rapidly, and by necessity, I can see when its economic influence upon the white race will make itself felt stringently within two more generations.

Late marriages have become quite common among our native men and women. This naturally must lead to a shortened period of fecundity. The husband's age has little to do with this. It requires a delay of about forty years on the part of the husband in order to decrease the number of children by one child, while every year of delay means a reduction of the limited period of maturity for the wife. Thus three years' delay results theoretically in one child less for this marriage.

Unquestionably, many marriages are entered into today only with the definite understanding that conception (fecundity) must be postponed. This may be for economic, selfish, or ambitious reasons. Next to selfish reasons cited, the economic problem is the most important because it is not very likely that the cost of living of this period will materially decrease. This problem, therefore, concerns the State and the nation at large. It is a problem that the Government must deal with. In fact, it is the most vital material problem of the nation in this generation, although it has not been regarded so. Most of us feel satisfied to learn from the census that our population at large has increased. But we overlook entirely that immigration has filled the gaps, and often with peoples of such low standards of intelligence and morals that they cannot be considered as a desirable admixture for the native American white race.

Next to this factor of wilful sterility we must consider congenital and acquired sterility. There were in 1920 in these United States approximately 2,000,000 sterile couples still within the age of potential child-bearing (Meaker, 1922). About every tenth marriage was childless. The influence of this on the birth rate is tremendous, when one realizes that every one of these infertile marriages means an approximate loss of three children to the nation. In 1916, when there were recorded over 1,000,000 marriages, the ultimate loss to the nation from infertility was 300,000 children, of which at least 250,000 would have lived to be added to our population.

Acquired sterility must be primarily charged to venereal diseases, the responsibility for which is about equally divided between male and female. Syphilis, for instance, constitutes a greater menace to infant life than the infectious diseases of childhood. In many large centers, at least from one-fourth to one-third of all stillbirths must be attributed to this disease (Knowlton). Stillbirths or early infant deaths of whatever cause, constitute a potential sterility. A woman who habitually aborts or

produces stillbirths, or whose infants die, is materially sterile. Therefore, this problem is of national importance. It cannot be solved merely by State health supervision, the failure of which was demonstrated in Wisconsin. It is a problem which can be solved only by general education. It requires to teach the parents to safeguard their offspring and to instruct the offspring how to protect themselves against the ever-present menace of venereal disease. Medical supervision will always be insufficient. Cults and narrowness of public opinion will block the sincerest efforts of our profession. The pressure to protect the offspring must come from within.

Education and propaganda by the Government, aided by teachers and physicians, and supported by the press at large, are to my mind the only means to reduce sterile marriages resulting from venereal disease, only too often innocently contracted after marriage. A better registration and follow-up system for venereal disease by the individual States must ultimately come, although at present it is very unsatisfactory on account of the fastly shifting population of our larger cities. Solitary efforts by States are more or less a waste. The problem is a national one in which all classes are concerned. Once we reach the point where parents demand a clean bill of health from the prospective son-in-law obtained through a neutral source, we have made the greatest step forward in health protection against venereal disease. Once this nation learns to speak frankly about venereal diseases, individual health protection will be demanded by every person before entering into marriage. The solution of this problem may still be far off, and it is here where our missionary work will do the greatest amount of good. This problem is distinctly one of preventive medicine and of greater importance to the welfare of the nation than all the other infectious diseases combined.

There are then three great factors which effect the normal increase of our native population: the moral influence which reduces our birth rate for selfish reasons; the material influence which reduces it for economic reasons; and the physical influence or disease which lowers our birth rate for reasons of acquired sterility. Each of these problems concerns us both as citizens and physicians, and it is, therefore, our solemn duty to the nation to educate the people in the principles of a sane sexual life and to join hands with the State and National Governments, as well as with the educators at large, to re-establish sound moral and economic standards so that our great nation may be spared the fate of decadence in years to come.

(Stanford University Hospital, San Francisco.)

The Relation of Infections of the Upper Respiratory Tract to Pyelitis—In four cases of pyelitis secondary to upper respiratory infection, reported on by Henry F. Helmholtz and Frances Milliken, Rochester, Minn. (*Journal A. M. A.*, October 6, 1923), the organism causing the primary infection did not reveal a tendency to localize in the kidney when injected intravenously into rabbits. No evidence was found that would tend to show that the primary infection acts specifically; but it probably produces a general lowering of resistance of the urinary tract to the colon bacillus, and gives it an opportunity to develop and produce inflammation.

THE INCIDENCE OF VENEREAL DISEASE IN PATIENTS SUFFERING WITH STERILITY*

By ALFRED BAKER SPALDING, M. D.

(From the Department of Obstetrics and Gynecology, Stanford University, School of Medicine.)

The histories of 200 patients complaining of sterility have been reviewed for the purpose of ascertaining the incidence of venereal disease in the group. One hundred and nine histories were of clinic patients.

The group of clinic patients were admitted to the Women's Clinic of Stanford University, School of Medicine, from June, 1919, to June, 1920, and were studied as a special problem by C. O. Sappington, who was then chief of clinic. This was just at the transition period in regard to routine Wassermann tests of clinic patients, and for that reason only sixty-three of the group were tested. Again, it is possible that the history of the patient influenced somewhat the request for the test.

Ninety-one histories were of private patients, most of whom were seen before the need for special venereal investigation in cases of sterility was appreciated. For this reason, only four wives and two husbands in this group were tested for Wassermann reaction.

Of the total sixty-seven patients tested, eleven patients gave a positive Wassermann reaction, or an incidence of 16 per cent. Carr and Saunders, in a recent publication, state that syphilis does not produce sterility. The question arises, is this a fair statement of fact?

To answer the question, it seems justifiable to compare the Wassermann reactions of our relatively small group of sterile patients with other groups of patients where our experience has been much greater.

Table I gives the results obtained with 882 patients tested in the gynecological ward of Lane Hospital, including 121 abortions and 15 cases of ectopic pregnancy. Of this number, there were 60 positive reports, or an incidence of 6.6 per cent syphilis.

Table II gives 43 positive reports in 1153 patients delivered in the obstetrical ward over the same period of time, or an incidence of 3.7 per cent.

These two tables show that, with normally pregnant patients, the incidence of syphilis is about half that found among the non-pregnant patients. Without going more deeply into the question as regards the relative parity of the two groups and the age question, it seems that with sterility there should be expected a higher incidence of syphilis to counterbalance the low incidence seen with the obstetrical patients. This view is strengthened somewhat by comparing the Wassermann reports of primary and secondary sterility.

Of the 200 patients studied, 136 were primary; that is, they had never been pregnant. Of these, 8 of 47 examined gave positive Wassermann reports, or 17 per cent. Of 64 secondary, who some years previously had had a child or an abortion,

*Read to the Section on Obstetrics and Gynecology at the Fifty-second Annual Session of the California Medical Association.

3 gave positive tests in 20 examined, an incidence of 14 per cent.

Moreover, a survey of the literature seems to substantiate the fact that the above figures approximate. Jeans concludes that from 10 per cent to 20 per cent of adult males and 10 per cent of married women are syphilitic, while 10 per cent of all marriages involve a syphilitic individual. Whitney found 21.8 per cent positive Wassermann among 1695 clinic patients. Solomon states that "sterility is common in syphilitic families, although it is impossible to show an absolute percentage due to syphilis alone." Vedder says that from 10 to 28 per cent of unskilled laboring men from 18 to 40 years of age are syphilitic.

From these statements and from our experience it seems justifiable to conclude that syphilis is a common factor in the clinical complex of sterility, and may reasonably be expected to show an incidence of 16 per cent.

The second part of this paper has to deal with the incidence of gonorrhoea in patients suffering with sterility. Here the problem of differentiating gonorrhoeal infections from streptococcus and other types of pathogenic infections is very difficult.

For some time the Public Health Laboratory has been using routinely the complement fixation test for gonorrhoea in the venereal ward at the San Francisco Hospital, and the results compare very favorably with the bacteriological findings. The test, however, has not as yet been adopted generally and has not as yet been used in the Stanford Clinic. The shortcomings of slide and cultural tests from pelvic secretions are too well known to need discussion. While positive reports are at times doubtful, negative reports are frequently worthless.

At the San Francisco Hospital, the laboratory work is most carefully and conscientiously carried out and patients are treated until at least three consecutive negative reports are returned. Nevertheless, all too frequently patients are returned for further treatment after leaving the hospital, supposedly free from Neisser infection.

For these reasons great reliance must be placed upon the clinical findings and in this paper patients with inflammation of Skene's glands, Bartholin's glands, the cervix, or the Fallopian tubes are included under the general class of pelvic inflammatory conditions as among these conditions must necessarily fall the cases of gonorrhoeal infections.

Accepting as true the clinical statement so frequent in textbooks, that infections of Skene's glands and Bartholin's glands are indicative of gonorrhoeal infection, it is interesting to see in Table III that 28, or 14 per cent, infections of Skene's glands have been noted with a slightly smaller number of infections of Bartholin's glands. One hundred and five, or over 50 per cent, showed cervicitis, while 60, or 30 per cent, gave evidence of tubo-ovarian infections.

At present, Rubin's test for tubal patency is a fluid occurrence both in office and clinic practice, but it was not in use when the present series was studied. For that reason, only nine private

patients in this series have been so tested. (Table IV.) Of these nine patients, four, or $44\frac{1}{2}$ per cent, showed closed tubes.

Forty-three patients, or $22\frac{1}{2}$ per cent, either had had their appendix removed or were operated upon later for chronic appendicitis. This fact has an important bearing in estimating the incidence of tubal infection, but can hardly account for the 50 per cent cervical infections.

Sixty-three patients had retroversions of the uterus and twenty-seven were associated with myoma uteri. From an experience of more than 7000 pathological specimens examined in the laboratory for obstetrics and gynecology at Stanford, I have come to believe that fibroids in some way are associated with chronic infections and pelvic congestions. Moreover, the gross specimen frequently shows both fibroid and pelvic inflammation of the tubes existing together.

In regard to retroversions, the frequency of such complications in normal pregnancy and the failure so often to cure sterility by resort to uterine suspension has led me to believe that uncomplicated retroversion is in itself not a frequent cause for sterility. For these reasons, I believe that many of the retroversions and fibroids noted above were merely associations of the more evident factor, namely an accompanying pelvic infection.

The husband, as so often is the case in general practice, has been neglected in the present study of sterility. In the clinic the same practical difficulties exist as are to be noted in private practice. Either the husband is too occupied with his work to come to the clinic or he is indifferent, or as is often the case, he wishes his present ability and his past experiences with procreation to remain a closed book.

Only thirty-three of the 200 cases gave a condom test, of which sixteen, or 50 per cent, showed that regardless of the wife's condition the case was hopeless because of the condition of aspermia. Of these cases twelve gave a history of gonorrhoea and two of syphilis. (Table IV.)

CONCLUSIONS

1. With 200 patients complaining of sterility, 16 per cent of the patients examined gave a positive Wassermann reaction.
2. The positive Wassermann reaction was more frequently found with primary sterility than with secondary sterility.
3. Fourteen per cent showed infections of Skene's glands; 50 per cent cervicitis, and 30 per cent gave evidence of tubo-ovarian infections.
4. Sixteen, or 50 per cent, of thirty-three husbands examined showed a condition of aspermia.

TABLE I
ROUTINE WASSERMANN REPORTS
Hospital Gynecology

Year	No. of Diagnosis	Negative	Positive	Per Cent Positive
1919	191	177	14	7.3
1920	196	185	11	5.6
1921	174	161	13	7.4
1922	217	199	18	8.2
1923—6 mo.	104	100	4	3.8
Total....	882	822	60	6.6

TABLE II
ROUTINE WASSERMANN REPORTS
Hospital Obstetrics

Year	No. of Diagnosis	Negative	Positive	Per Cent Positive
1919	289	280	9	3.1
1920	297	287	10	3.3
1921	243	232	11	4.5
1922	217	208	9	4.1
1922—6 mo.	107	103	4	3.7
Total....	1153	1110	43	3.7

TABLE III
STERILITY

	Primary		Secondary		Totals	Per Cent
	Clinic	Private	Clinic	Private		
Number ...	83	53	26	38	200	
Infected ...	61	27	20	24	132	.66
Cured	9	2	6	7	18	.09
INFECTIONS						
Bartholinitis	5	9	1	6	21	.10
Skenitis ...	8	10	4	6	28	.14
Cervicitis ..	50	23	15	17	105	.52
Pelvic In-						
flamatory	30	13	9	8	60	.30
Appendicitis	19	13	3	8	43	.21
OTHER CONDITIONS						
Retroversions	26	12	11	14	63	.31
Fibroids ...	14	6	4	3	27	.13

TABLE IV
TESTS OF PATIENT AND HUSBAND FOR CAUSES OF STERILITY

	Primary		Secondary		Totals	
	Pt.	Husb.	Pt.	Husb.	Pt.	Husb.
Reubin Test.....	0	5	0	4	0	9
Tubes Closed.....		3		1		4
Wassermann Test.	47	0	16	4	67	2
" Positive	8	1*	3	1*	0	2
Condom Test.....	5	10	6	12	33	3
Aspermia	3	5	5	3	16	3
Gonorrhoea	7*	1*	3*	1*	12	

*No test made. Diagnosis based upon history only.

THE SIGNIFICANCE OF CERVICAL PATHOLOGY IN STERILITY*

By ALBERT VICTOR PETTIT, M. D.

From the Department of Obstetrics and Gynecology, Stanford University School of Medicine.

The material for this report has been collected from patients seen at Stanford women's clinic and from the private records of Professor Spalding. No attempt has been made to select particular types of cases and these records have been compiled just as the cases presented themselves, in order to obtain some idea of the relative frequency of the various lesions contributing to the production of sterility in the female. Only cervical conditions presented by the patients studied are considered.

In 230 sterile women examined, whose average age was twenty-nine years, and whose average period of sterility was five years, chronic infection of the cervix was present in 129, or 56 per cent, and of these 129 cases, seventy-two or 31 per cent, gave palpable evidence of internal pelvic inflammation. Undoubtedly, many more than this had internal pelvic inflammatory disease, for it is often not palpable. In thirty cases of chronic endocervicitis we found closed tubes by insufflation tests in twenty-two, or 73 per cent of cases. (Table I.)

Stenosis of the cervix appears as the possible cause of the sterility in eleven cases. The importance of cervical stenosis in the production of sterility is questionable, and alone is probably rarely a cause. In each of the eleven cases here reported, there were varying degrees of inflammation, apparently enough in each case to produce sufficient thick mucus to plug the stenotic canal.

The seven infantile cervixes (Table I) accompanied infantilism of the other organs of generation and probably should not be listed as a separate cause of sterility. An endocervical polyp was

the cause of sterility in one case. A glandular hyperplasia of the endometrium was also present. This patient became pregnant shortly after curettage of the uterus and cervix.

Forty-four of these cases were tested for tubal patency. Of fourteen tested who showed no signs of cervical infection, all tubes were found to be patent; in thirty infected cervixes, only eight showed patent tubes, while twenty-two admitted no gas whatever at several testings. The eight inflammatory cases with patent tubes probably owed their sterility to the cervical condition directly. The possibility of endometrial or ovarian inflammation is not excluded, however. (Table II.)

In a series of 125 cases, average age 26, with known cervical inflammation, forty-two were sterile. In each one of these cases a section of the cervix and a curettage specimen of endometrium were studied microscopically; in only sixteen was there any evidence of infection, thus showing the marked immunity of the endometrium even in the presence of cervical and tubal disease. (Table III.)

Infection of the intact cervix is practically always gonorrhoeal at its inception, often later being entirely replaced by other organisms; lacerations and contusions of the cervix which do not heal promptly predispose the cervical tissues to infection by other pyogenic organisms.

The presence of chronic infection in the glandular elements of the cervix changes the mucus secreted by the cervical glands into thick mucopurulent plugs which entangle the spermatozoa and also kills them. The reaction of the secretion is often changed from mildly alkaline to strongly acid, possibly contributing somewhat in reducing the vitality of the spermatozoa.

Local plugging of the cervical canal, however, is not the most important role played by cervical infections in producing sterility. The cervix is the distributing focus for practically all infections of the internal organs of generation. Lymphatic

*Read to the Section on Obstetrics and Gynecology at the Fifty-second Annual Session of the California Medical Association.

drainage from the mucous surface of the cervical canal is upward and outward through the musculature of the uterus toward the serous coat, from where the lymphatic vessels leave the uterine surface by way of the sacro-uterine and broad ligaments, and it is this path by which the infection reaches the pelvic organs. The milder infections of the cervical glands seem to cause the production of thicker mucus plugs, while the more virulent infections cause a more serious discharge but extend

to the adnexae earlier and with more disastrous results.

In these 230 sterile patients, pelvic inflammation seems to be the most important single condition causing sterility, showing 56 per cent infected. The indication is for early and thorough treatment of the cervix to prevent local barriers to the ingress of spermatozoa and to prevent internal extension of the infection which may cause permanent destruction of the generative organs.

TABLE I
STERILITY—230 CASES

Av. Duration Sterility 5 yrs	Average Age 29	Cervicitis 129 56%	Pelvic Inflamma- tory Disease 72 31.3%	Stenosis 11 4.7%	Infantile 7 3.0%	Polyp 1 0.4%
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TABLE II
TUBAL PATENCY RESULTS

44 Sterile Cases			
	Number	Open Tubes	Closed Tubes
Cervix Clean	14	14	0
Infected	30	8	22

TABLE III

CERVICITIS—125 CASES

Average Age 26			
Cervicitis	Pelvic Inflamma- tory Disease	Endometritis	Primary Sterility
125 100%	46 37%	16 13%	42 33.6%

THE ADNEXAL ORGANS IN RELATION TO STERILITY*

By C. W. ANDERSON, M. D., Los Angeles

The increased knowledge of the physiology and pathology of the ovary, which has come with the wonderful advances made in the study of the endocrine system, as well as the epoch-making contribution of Rubin to the diagnosis of tubal conditions, have given an unprecedented impetus to the study of the whole subject of sterility.

The tubes and ovaries play a very important part in the production of sterility and until comparatively recently the blame for almost all cases of sterility was laid at the door of the tubes.

I would like to discuss this subject under the headings:

1. Pathological conditions of the tubes and ovaries causing sterility.
2. Their diagnosis.
3. Their treatment.

It is hardly necessary for me to say, by way of introduction that one of the conditions necessary for impregnation is a tube offering an open channel for the ovum to descend and the spermatozoon to ascend, and that any condition which interferes with these functions is a potential cause of sterility.

Infantilism occasionally manifests itself in a persistence of the spirally twisted condition of the tube, which is common in early life. This may cause sufficient obstruction in the lumen of the tube to prevent the free passage of the ovum or spermatozoon and hence be a cause of sterility. In most cases of this kind evidences of infantilism are present in other parts of the generative system, and make it all the more improbable that pregnancy can occur.

Acute appendicitis in childhood or early womanhood may be a factor in producing sterility in later

life. Graves (Archives of Surgery 1921-2, 315) has particularly called attention to this subject. He believes that very frequently the serofibrinous exudate from the region of the inflamed appendix gravitates to the pelvis and sets up sufficient peritonitis to cause occlusion of the abdominal ostium of the tube. This would explain many of our cases of occluded tubes in which no history of gonorrhoeal or other pelvic infection is obtainable.

Salpingitis is by far the most important factor in impairing the functional value of the tube as an oviduct. Curtis (Surgery, Gynecology and Obstetrics, December, 1921) gives the results of the bacteriological and pathological investigation of fallopian tubes removed at operation from 300 patients. Not only were smears made from the fluid in these tubes, but the tubes themselves were ground up and cultured. He concluded that the gonococcus was responsible for approximately 80 per cent of these cases, other pus-producing bacteria, notably various types of streptococci, caused 15 per cent, while evidence of tuberculosis was found in 5 per cent.

In this discussion we are especially interested in the end results of infections, for it is these which cause sterility. It was formerly believed that when once a patient had developed gonorrhoeal salpingitis she was doomed to permanent closure of both tubes with resulting sterility. More careful study of these cases has proven that gonorrhoeal salpingitis, more than any other type of salpingitis, shows a tendency to spontaneous recovery, and that many women with bilateral gonorrhoeal salpingitis have recovered and subsequently borne children. A single attack of mild gonorrhoeal salpingitis frequently leaves no bad after effects. Those tubes, however, which are subjected to a severe attack of salpingitis, or frequent reinfection from a focus, such as an endocervicitis, are apt to be permanently damaged. In such cases the fimbriated extremity very frequently becomes occluded either by retraction or adhesion of the fimbriae, or by a plastering of the end of the tube to the ovary, or some adjacent structure.

*Read to the Section on Obstetrics and Gynecology at the Fifty-second Annual Session of the California Medical Association.

This may be followed by distention of the tube with formation of pyosalpinx, hydrosalpinx, or hematosalpinx. The perisalpingitis in gonorrhoeal cases is not usually so crippling in its results, nor so permanent as in other infections. Some authorities state that at operation one can differentiate between gonorrhoeal and other forms of salpingitis by the density of the adhesions, and the difficulty encountered in their separation. The gonorrhoeal cases usually separate much more readily than the others, but it must be remembered that there are notable exceptions to this rule.

Sometimes the tube remains open at the abdominal extremity, but closed in some other part of its course. This is due to extensive destruction of epithelium with adhesion between the folds of the mucosa. Serious damage to the lining of the tube is more common after gonorrhoeal infection than that caused by the streptococcus.

In post-puerperal and post-abortion infections perisalpingitis and persistence of infection are the most notable features. There is less damage done to the endosalpinx, but the adhesions to surrounding structures are more dense and show less tendency to be absorbed. Streptococci may be obtained from tubes months or even years after the acute process has subsided, while gonococci usually become inactive two or three weeks after the disappearance of fever and leucocytosis (Curtis).

In tuberculosis of the tubes, adhesions are usually very dense, the tubes are much thickened due to hyperplasia of the mucosa, but occlusion of the fimbriae is not so frequent as in gonorrhoeal tubes of the same severity. Needless to say sterility is the rule in such cases.

Tumors of the fallopian tubes are too rare to require more than passing mention.

Pathological condition of the ovary causing sterility.

A second condition necessary to impregnation is an ovary producing and discharging healthy ova. S. R. Meaker (Boston Medical and Surgical Journal, October, 1922) groups the disorders interfering with this condition under four headings:

1. Constitutional.
2. Toxic.
3. Endocrine.
4. Mechanical.

Constitutional causes are such as malnutrition, anaemia, cachexia and those conditions arising from faulty diet and hygiene. Reynolds (American Journal of Obstetrics and Gynecology, October, 1921) has shown by experimental work that a decrease in the fat soluble vitamins, of the protein or of the calcium contained in an otherwise excellent diet produces a definite decrease in the fertility of individual rats. It is fair to conclude that the same is true to some degree in women.

Of toxic conditions the most important are syphilis, mumps, chronic poisoning from alcohol, morphin, arsenic, phosphorus and lead.

Endocrine sterility includes cases of infantilism, where the ovaries have never developed, as well as those in which sexual activity wanes early in life.

The mechanical disorders which cripple the ovary are largely the result of inflammation. The

whole subject of oophoritis is in a very unsettled state, but that such a condition does exist, and that it is frequently followed by adhesions of the ovary to adjacent structures, by thickening of the tunica albuginea, and by increase of the interstitial connective tissue is generally admitted. These conditions interfere with the normal maturation of the Graafian follicle and with the discharge of the ovum and consequently are causes of sterility.

Conception seldom takes place in the presence of double ovarian tumors or dermoid cysts.

Diagnosis.

The important point in diagnosis in a case of sterility in which the tubes are suspected is not so much what pathological condition, if any, is present, but whether the tubes are patent or occluded.

In the past the great barrier to the study of the tubes has been the fact that it was necessary to perform a laparotomy to determine whether the tubes were patent or not. Most women hesitate to undergo such an operation when they can not be assured that there is a condition in the tubes requiring operation, and further that there is not a fifty-fifty chance of a good result even if the tubes are found to be closed.

This barrier has largely been removed by the introduction by Rubin of the gas-inflation test.

Briefly the test consists in passing carbon dioxide gas through the uterus and tubes, followed by its demonstration in the peritoneal cavity by the use of the X-rays. The apparatus necessary for Rubin's test is: (1) a tank of carbon dioxide gas with a pressure gauge to control the rate of flow, (2) a glass chamber containing a volumeter to measure the amount of gas, (3) a mercury manometer to register the pressure of gas, (4) an interuterine canula of the Keyes Ultzmann type, fitted with a rubber stopper to block the cervical canal, (5) rubber tubing to connect the various pieces of apparatus.

Rubin has found that the most satisfactory rate of flow of the gas is that which will register 100 mm. mercury in fifteen seconds when the outlet to the uterine canula is blocked. The amount of gas used to determine the patency of the tubes is about 160 cc., which is indicated by four pulsations of the volumeter.

The technique of the test is as follows: The patient is placed in the lithotomy or Sims position, an appropriate speculum introduced, the vagina is cleansed and any mucus present in the lower part of the cervical canal removed, cervix and endocervix painted with iodine. The direction of the uterine canal is determined accurately with a uterine sound. The apparatus having been prepared with gas flow properly regulated, the sterile intrauterine canula is introduced well beyond the internal os., the rubber stopper completely closing the cervical canal. It is seldom necessary to grasp the anterior lip of the cervix with a tenaculum as recommended by some authors. The gas is turned on and the manometer carefully watched.

In patent cases the pressure will rise to a point somewhere between 50 and 150 mm., then drop sharply to 40 or 50 mm., at which point it fluctuates as long as the gas is flowing. If the pressure

goes above 150 mm. and then falls rapidly, it is interpreted as indicating that there was some obstruction in the canal caused by a kink or a plug of mucus, and that the kink has been straightened out or the plug dislodged. A repetition of the test in such cases usually shows a frankly patent tube.

If the pressure rises above 150 mm. and then falls very slowly it indicates a stenosis of the tubes, which permits the gas to pass very slowly. It may indicate a closure of one tube, and a stenosis of the other. Some investigators believe that they can locate such a stenosis by auscultation over the lower abdominal quadrants, the whistling sound of the gas going through a narrow opening indicating the side of the stenosed tube.

If the pressure rises to 200 mm. on repeated tests, a diagnosis of non-patency can be made.

After the pneumoperitoneum is produced patients usually complain of pains in the abdomen, like gas pains. When they are allowed to sit up, the gas rises to the space between the liver and the diaphragm and pain in the right shoulder is almost invariably noted. At this point the patient may be fluoroscoped and the presence of a pneumoperitoneum made certain by the appearance of a halo over the dome of the liver. Many observers feel that this is unnecessary and rely on the shoulder pain as conclusive evidence of pneumoperitoneum.

I believe that at least for those inexperienced in this work it is advisable to check up by the use of the fluoroscope.

At first sight it would seem that there would be danger of forcing infectious material out through the tubes into the pelvic peritoneal cavity. Experience in hundreds of cases has shown that the reaction in the pelvic peritoneum is insignificant, or entirely absent. I have not found one case reported where there has been a serious reaction. The pain caused by the presence of carbon dioxide in the peritoneal cavity is of very short duration, seldom lasting more than thirty minutes.

There are, of course, certain contraindications to the use of this test, which must be carefully adhered to. Acute infections of the vagina, or pelvic organs are absolute contraindications. In chronic infections associated with pain the examination had better be deferred until the pain has cleared up. The test should not be performed just before or after a menstrual period. Patients with myocardial disease are not good subjects for inflation.

This test has been used in such a large number of cases, by some of the most competent men in this country, that we must realize that it is an accepted addition to our diagnostic and perhaps therapeutic armamentarium, and that no patient should be submitted to an abdominal operation for the cure of sterility until the non-patency of the tubes has been demonstrated by tubal inflation.

Modifications and simplifications of this test have been suggested. One worthy of note is that of Furniss (Surgery, Gynecology and Obstetrics, November, 1921). He used a tight-fitting 30 cc. Luer syringe with a T connection. The right angle arm of the T goes to a manometer, while

the direct tube connects the syringe to the intra-uterine canula. The patient is put in the Trendelenburg position, with the hips elevated, a bivalve speculum introduced into the vagina, the canula introduced, and the vagina flooded with boracic acid solution. Furniss states that 15 cc. is the maximum capacity of the uterine canal and tubes. Therefore 30 cc. of carbon dioxide gas is injected, and if no gas bubbles back from the cervix, then the gas must have escaped through the tubes. I have not tried this simple technique, but cannot see why it should not be satisfactory.

Diagnosis of conditions of ovary.

With the exception of tumors and cysts of the ovary the diagnosis of the ovarian condition present can best be made by careful consideration of the history.

For example, with all other causes of sterility eliminated as carefully as possible, and with a previous history of pelvic inflammation followed by irregular, scanty and painful menstruation, added to the finding of a small, fixed, painful ovary, one would be justified in concluding that the ovary was the seat of the trouble. Fine differential diagnoses in such cases are not to be considered. One must keep in mind the possibility of constitutional, toxic and endocrine causes, as mentioned above.

Treatment.

The relief of sterility by operation on the tubes and ovaries has never been a very optimistic chapter in the history of surgery. Some surgeons state that they have never seen pregnancy follow plastic surgery on the tubes, while others claim a fair share of success. On the whole, the tendency at the present time is towards optimism and this is based largely on better selection of cases due to the possibility of more accurate diagnosis.

The therapeutic value of gas inflation seems to be forcing itself on the minds of all who are using this method. Many of the recent articles on gas inflation state that a certain percentage of their cases become pregnant very soon after they have been tested, suggesting that a very slight obstruction in the tubes has been removed by the passage of the gas.

The strong argument against salpingostomy has always been that there would be sufficient reaction following operation to close the new ostium. It is only logical to believe that repeated inflation at short intervals following this operation will tend to keep the tubes open.

The standard operations on obstructed tubes consist of some method of dilation in the mild cases, and salpingostomy or salpingectomy with implantation of part of the ovaries in the uterine coruna in the severe cases.

With the abdomen open a slight stenosis or kinking of the tube may be relieved by the passage of probes, or pneumatic dilation. In sterile patients who are being subjected to abdominal operation, Curtis (A. M. A. Journal, February, 1923) recommends the distention of the tubes by the use of air forced in by a Luer syringe placed at the fimbriated extremity of the tube. He states that "this procedure reveals the presence of otherwise undemonstrable obstruction within the tube, minor

strictures when discovered may be overcome by forcible syringe pressure, the anatomic limitations of grossly palpable obstruction, possibly amenable to plastic surgery, may be more definitely determined, and at the completion of plastic operations on the tube, it is possible to test the patency of the reconstructed lumen."

Blair Bell (Oxford Surgery, Vol. 5, page 242) states that salpingostomy is seldom indicated for a closure of fimbriated extremity due to primary salpingitis, as the uterine end of the tube is frequently blocked in this condition. In cases where the infection has spread to the covering of the tube, from such conditions as appendicitis, the lining membrane of the tube is usually intact and salpingostomy is indicated.

In extreme cases, where both tubes are damaged beyond repair, but one or both ovaries are in fair condition, one may try extirpating the tubes and planting a piece of ovary in each uterine cornu. A few successful cases of this kind have been reported (Graver's Gynecology, page 265), but the chance is a long one.

Conditions of the ovary leading to sterility do not offer an attractive field for surgery. Perhaps organotherapy offers a more hopeful outlook.

In conclusion, I would urge a more careful study of women complaining of sterility, emphasizing especially the value of the inflation of the tubes as a means of diagnosis.

In cases of non-patency where there is no evidence of serious damage to the lining of the tubes, and where the ovary seems to be normal, I would advise salpingostomy followed by gas inflation at regular intervals to preserve the patency of the new ostium.

We have to admit that the results of this work in the past have not been very brilliant, but I believe that we may fairly look forward to good results in the future, provided that only those cases are submitted to operation in which common sense tells us that there is a reasonable expectation of a cure.

840 Pacific Mutual Bldg.

"Throw Away Your Glasses"—In the September number of Hearst's International appears a contribution entitled "Throw Away Your Glasses," by one W. H. Bates, M. D. The article is an unfortunate hoax for thousands, even tens of thousands, of persons who will be cruelly deluded by its irrational bunkum. It presents a half-baked theory, based on the crudest of experimental work, elaborated in a pseudo-scientific manner and presumably broadcast by the magazine because of its sensational title. Half or less than half truths are announced as facts without any investigation of underlying anatomic and physiologic conditions, and with no careful experimental study. Certainly the case reports are too questionable to stand thorough analysis. The entire matter illustrates again the danger of unauthoritative instruction of the public in medical matters. One article of this character may undo the good work of years by committees and councils for the conservation of eyesight; it will lead into false paths many of the afflicted who were progressing slowly but surely on the road to recovery. An editor's note indicates that the article is sponsored by Mr. Norman Hapgood himself. Where did Mr. Hapgood acquire his knowledge of the science of ophthalmology?—*Jour. A. M. A.*, Sept. 1, 1923.

TUMORS AND DISPLACEMENTS IN RELATION TO STERILITY*

By FRANK W. LYNCH, M. D.

From the Department of Obstetrics and Gynecology,
Medical Department, University of California,
San Francisco

This paper is limited to the discussion of fibroids and retroversions and retroflexions as causes of sterility.

FIBROIDS AND STERILITY

There is no doubt but that the fibroid statistics of the literature show a higher proportion of sterile marriages than of married women in general. The figures for married women, as a class, vary considerably. They depend for the most part upon the frequency of the common causes of sterility such as preventives for conception, tubal and ovarian inflammation, anatomical defects, etc., some of which may operate equally well in women who have had or subsequently will have fibroids. Sterility in women who have been under treatment for some medical or gynecological condition varies between 7 and 21 per cent. Goetze found that 7 per cent of 730 gynecological cases were sterile, the series including some fibroids. Hofmeier found 8.1 per cent of sterility in 5462 clinic cases in contrast with 17 per cent for 2795 private cases. Sterility in the married women of the series of Sims, Simpson, Wells and Duncan ranged from 8 per cent to 15 per cent. Young and Williams found sterility in 10.5 per cent of 238 medical cases who had no pelvic complaints. Grunewaldt recorded sterility in 21 per cent of 900 gynecologic cases and felt that developmental arrests were responsible for the condition in all cases. On the contrary, sterility is said to exist in approximately 30 per cent of married women with fibroids. Olshausen found this percentage in the 1730 married women constituting the series reported by West, Roehrig, Beigel, Schumacher, Scanzoni, Michels, Winckel, Schorler and Hofmeier. When reviewing this subject some years ago, I found certain errors in some of the tables forming the basis of Olshausen's calculations, yet they did not affect the percentage in an appreciable manner. Adding to this series, the cases of Schroeder, Young and Williams, Haultain, Goetze and Kelly and Cullen, we found that 31.5 per cent of the 3617 cases were sterile. My individual series shows about the same proportion. Only 169 of the 215 fibroid cases in the married women of my series had had children, a sterility of 31.8 per cent.

The above shows that there is twice as much sterility in fibroids in married women as is found in married women in general who have been under medical care. Our first part of the problem is to find whether sterility may result from the tumor itself. There is some evidence in favor of the positive view, since the percentage of sterility has been shown to vary according to the size and location of the tumor. It is usually believed that sterility is most common in the cases with submucous tumors, but this idea is not confirmed by the literature. It is of interest in this connection

*Read to the Section on Obstetrics and Gynecology at the Fifty-second Annual Session of the California Medical Association.

to recall that pregnancy may occur in carcinomatous uteri. We often see it in women who are still under treatment for marked leucorrhea and cervical irritation. The advocates of the theory do not consider that submucous tumors are rarely seen in non-parous women. They originate presumably most often following the puerperium, being displaced from interstitial positions during the involution of the uterus. Goetze found that 91 per cent of his submucous fibroid cases had borne children.

On the contrary, the literature indicates that there is a higher proportion of sterility in the larger than with the smaller tumors. The highest percentage of sterility in the most interesting series of Schorler, Young and Williams, and Goetze, is found in the interstitial or subserous groupings, probably because the largest tumors were of these types. Goetze arranged his cases in four groups according to the size and number of the tumors and the severity of the symptoms. The sterility percentage ranged from 13.6 per cent for the fibroids the size of an apple, to 50 per cent for growths the size of a man's head.

Personally, I cannot accept these interesting findings as absolute proof that the tumor usually accounts for the sterility. There is always the chance that the sterility accounts for the tumor. We see too many pregnancies with tumors of large size to believe that the changes induced by the growth are likely to cause sterility. In this connection, we must remember that fibroids are most common in the latter half of menstrual life, while pregnancy usually first occurs at a much earlier age. Long before the fibroid appears, the woman may have been sterile. The great mass of fibroids in my individual series were only a few centimeters in diameter. It does not seem reasonable to suppose that these tumors, almost invariably subserous or interstitial, were responsible for the sterility. Far more likely it is that a common factor accounted for both fibroids and sterility.

It is well known that fibroids are common in virgin women of middle life, from which it is argued that they result because the uterus has been denied its opportunity to hypertrophy in its physiological manner, i. e. pregnancy. This view was first expressed by Bayle in his classical paper of 1807. This view is supported by nearly all men who do the surgery of the religious orders composed of celibate women in whom fibroids are common findings. We are likely to forget, however, that Bayle at the same time emphasized the fact that fibroids were common in married women who were relatively sterile. We must distinguish between women who are virgins and those who are sterile. I feel that the latter part of Bayle's statement has been misinterpreted and instead of holding that it supported the view that fibroids developed because the woman was sterile, incline to the belief that it supports the theory that fibroids develop in women who are relatively sterile because of congenital causes.

UTERINE RETRODISPLACEMENTS AND STERILITY

Since the time of Sims, the belief has existed

that pregnancy is not apt to occur in a retrodisplaced womb, yet every obstetrician of experience knows that women with retroposed uteri may prove very fertile. Personally, I have had a large number who have had two or three children. One case has had five pregnancies in the last six years. Her uterus was known to have been retroposed before marriage, and has been back at every examination made during her non-pregnant condition.

Yet these cases, like the fertile women who have had fibroids, may well be exceptions to the rule. There is considerable evidence for the belief that women with retroverted uteri do not as readily become pregnant as women with the more normal position.

During the past seven years, we have been conducting a study of the meaning of uterine retroversio-flexions. The series consists of 459 cases, half of which have been followed for more than one and a half years and fifty-three for from five and a half to seven and a half years. One hundred and twenty-eight, or 28 per cent, of these women with displacements have had subsequent pregnancies. Unfortunately we have no series of normal controls with which to make comparisons as to fertility. Our controls were followed for comparatively short periods of time. In another study, however, we showed that pregnancies were observed in 15 per cent of 430 cases who did not have displacements, in 10 per cent of displacements which had been corrected by replacement of the uterus and pessary support, and in only 5 per cent of the series with more or less persistent retrodisplacements.

Our present study suggests that congenital anomalies may account for both the sterility and displacement in a considerable portion of cases, although the disturbed uterine circulation may account for the sterility in many of the acquired retropositions.

Our investigations force the conclusion that a large per cent of retrodisplacements that give no symptoms are of congenital origin and that sterility is more common in the congenital than in acquired retropositions. This view was evolved while trying to explain the varying percentages of fertility in our displacement cases. The following tables are of interest in this connection.

There were 459 retroposition cases divided in various groupings, chiefly as (a) retrodisplacements with, or (b) without symptoms, subdivided according to the presence or absence of perineal and cervical lacerations. There were 128 of the 459 retroposition cases who had one or more pregnancies subsequent to our finding a retrodisplaced uterus. Sixty-one per cent of the women that became pregnant were in the group (A) of 236 displacements that had symptoms, while only 39 per cent of the women that became pregnant were in the group (B) of 223 retrodisplacements that had never complained of pelvic symptoms. There were 310 cases of simple retroposition without evidence of cervical or perineal lacerations. One hundred and thirty of these had symptoms and 180 did not have them. There were 79 women of the 310 simple retropositions that had pregnancies, 39 of these in the 130 simple retropositions that gave symptoms, and only 40 in the much larger group

of 180 simple retropositions that did not give symptoms.

Of the 128 women who became pregnant in the total series of 459 cases, pregnancy occurred in 80 cases while the uterus was known to be in the forward position and in 27 cases while it was known to be retroposed. The uterine position was not known at the time of pregnancy in the other 21 cases, although it had usually been posterior.

In conclusion, we state our belief that sterility occasionally is caused either by fibroids or posterior displacements, but the great cause is probably congenital or of developmental origin.

WHAT RELATION EXISTS BETWEEN THE ENDOCRINE GLANDS AND STERILITY?*

By F. M. POTTENGER, M. D., Monrovia, Calif.

ENDOCRINE FACTORS IN STERILITY

The importance of disturbance in endocrine equilibrium as a cause of sterility is just beginning to dawn upon the medical profession. With a better appreciation of functional pathology we are learning that there are many conditions met in clinical medicine which do not have primarily an anatomic basis. The recognition of the fact that disturbance in function is a clinical entity worthy of the same attention and care as anatomical change is ushering in a new era in medicine in which the individual becomes greater than any part and in which the unity of the human body is emphasized.

With this new conception the psychical side of the individual also takes its place in the causation of symptoms along with the physical, and alterations in function in a given tissue or organ are recognized as being resultants of all the forces acting at the time upon that organ.

Functional pathology is a real important part of clinical medicine. No one can be conversant with visceral neurology, endocrinology and biochemistry without recognizing that any important function of the body may be disturbed without having a primary anatomical pathology back of it; and furthermore, no one can be conversant with the psychical side of man without knowing that those great vegetative systems can be disturbed by pathologic psychic states as well as by stimuli arising in the physical body. Unless one recognizes these facts he will fail to appreciate and properly classify a certain large group of clinical syndromes which are met in the every-day practice of medicine.

The subject of sterility in women illustrates these principles well. It cannot be adequately discussed from the anatomical basis alone. While inflammatory disease of the ovaries, tubes and uterus and mechanical interference with conception often exist, there is still a group of sterile women, the percentage of which is uncertain, as yet, who do not respond to any of the measures

which are applied for the relief of their sterility, because the cause is functional and not anatomic.

In order to understand this it is necessary to have a comprehensive understanding of the fundamental physiologic factors governing the development of sex glands and their function. While the production of the ovum and the reception and retention of it in the uterus when fecundated are essential to successful impregnation, the factors which control impregnation are many and are connected with various portions of the vegetative systems.

Whether or not a woman shall be able to bear children is not determined alone by the possession of ovaries, tubes and a uterus, but upon such organs being able to function normally. This presupposes a normal development and the maintenance of normal sexual function.

The development of the female sexual organs, as well as the female secondary sex characteristics, depends upon many of the endocrine organs. There cannot be normal sexual development and normal sex function without the incretions from the thyroid and pituitary and other incretions, while less important, also effect changes in the sex organs. Genital function is stimulated by ovarian, thyroid, pituitary and suprarenal secretions. It seems to be diminished by the thymus and at times by thyroid.

THE OVARY IN STERILITY

The ovary is a very constant factor in a certain group of cases of sterility. Ovulation may not take place; but, as is proven in cases of pregnancy during lactation, ovulation often takes place when menstruation is absent. Congenital ovarian insufficiency as a cause of amenorrhoea and sterility is believed to be rare. Hypoplasia and hypoactivity of this kind is caused as a rule by hypoactivity of the thyroid or the pituitary. The adrenals are also at fault at times.

These relationships which the various incretions bear to the sex function offer a basis for treatment of quite a large group of women suffering from sterility. Ovarian extracts should be employed in these cases of diminished sex function, but alone will rarely produce satisfactory results. If the relationship of the thyroid and the pituitary to the condition under observation is carefully diagnosed and the indicated incretion added, then success will very often follow the treatment.

INFLUENCE OF THE THYROID

A very marked reduction of thyroid secretion in early life produces cretinism, a condition which is accompanied by a failure of development of the body as a whole, including the sex organs. If the thyroid secretion becomes diminished later in life, the ovary and uterus may become infantile through atrophy; amenorrhoea may result; or, if the age of puberty has not been attained, the function may not be established at all. If the deficiency in thyroid comes later in life, after the sex function has been established for years, instead of amenorrhoea, menorrhagia sometimes occurs, the menstrual periods being prolonged and the intervening time being shortened. Therefore it is evident that a very marked influence is exerted upon the sex

*Read to the Section on Obstetrics and Gynecology at the Fifty-second Annual Session of the California Medical Association.

organs and sex function by the thyroid secretion; a decrease in this secretion in early years stunting the growth and development of the sex organs and in later life depressing the function of ovulation and menstruation. The effect of this influence leads to sterility in quite a proportion of cases. In marked myxoedema, sterility is the rule, the cause being ascribed partly to the infiltration of the uterine mucosa and muculature. The types of sterility due to lessened thyroid secretion coming on after the sex organs have been developed may be relieved by the administration of thyroid substance.

THE PITUITARY IN STERILITY

The influence of the pituitary on the sex organs is often greater than that of the thyroid. Hypopituitarism occurring before puberty may produce any one of three distinct conditions: infantilism, both general and sexual without adiposity; stunted growth with genital hypoplasia and adiposity; or gigantism with adiposity and genital hypoplasia. All of these conditions lead to sterility. Hypopituitarism as found in acromegaly also produces sterility, but here the condition seems to be due to an entirely different cause. Acromegalic women assume the masculine type, and this masculinity is the cause of their sterility instead of the genital hypoplasia as found in hypopituitary states.

The question of these early hypopituitary states is not one of sterility, but one of overcoming the entire group of bodily changes produced by the deficiency. If one is alert to the changes caused by deficiency in pituitary secretion and will recognize it before serious harm has been done, appropriate treatment will often be followed by relief of both developmental and functional disturbances.

There is an extremely interesting inter-relationship between ovary, thyroid and the pituitary, which must always be borne in mind in attacking those functional disturbances on the part of the female sex organs which are due to causes other than inflammatory and mechanical. So far, in the administration of organotherapeutic preparations that from the thyroid is the one that gives best results. In conditions where the ovary and pituitary are at fault, the thyroid is usually a factor, and with the active thyroid preparations that we have we are usually able to do some good by their administration.

STERILITY FOLLOWING TOXEMIA

It is not uncommon to see cases of sterility and early menopause follow toxemia. In some of these cases the cause may be due to direct injury to the ovary, but in many others it is a secondary matter, caused by injury to the thyroid and the pituitary. Sterility sometimes follows acute infections such as mumps and typhoid. In one or two instances I have seen early menopause in tuberculosis. A cessation of menstruation for a period of months is not at all uncommon in tuberculosis, and we often observe temporary hypopituitarism and hypothyroidism of various grades, develop following the toxic states which are met in the course of chronic tuberculosis. Such conditions may suggest themselves, but equilibrium can be hastened by appropriate therapy.

THE DIAGNOSIS AND TREATMENT OF STERILITY*

By FREDERIC M. LOOMIS, M. D., Oakland

AN ANALYSIS OF 150 CONSECUTIVE CASES

In making this analysis I set out to determine what types of sterility patients might be classified as reasonably good "prospects" at the first interview, when the history is taken and general physical and pelvic examinations are made, and the rather unexpected and interesting finding is that such a hope is futile.

The figures that follow are based on a tabulation of 150 consecutive sterility patients, covering age, general health, menstrual abnormalities, leucorrhea, marital years, parity, voluntary or involuntary abortions, general health of the husband, fat, skin condition, tonsils, teeth, cervix, size and position of fundus, appendages, vaginal reaction before and after coitus, number and activity of spermatazoa present in the vagina and cervix after coitus, the size of the seminal pool, and the sexual reaction. The treatment is classified under six other heads.

Extended consideration of the several thousand facts thus available has shown the absolute necessity of four different procedures with each patient, none of which may ordinarily be omitted, to reach a fair diagnosis. These are (1) the history, taken with unusual care; (2) the general physical and pelvic examination, including the vaginal and cervical reactions to litmus; (3) examination of the secretions after coitus without the use of a condom, and (4) determination of the patency of the tubes by inflation. We have all seen the patient who comes to us after years of hope deferred, saying, "My doctor gave me a careful pelvic examination and said I was perfectly all right, but month after month I am disappointed." That a careful pelvic examination is not enough is shown by patients No. 116, 30 and 14. Each of these had a pelvis which would pass as "perfectly all right" on ordinary examination, yet each was hopeless. No. 116, with perfectly patent tubes, had a husband with complete aspermia; No. 30, with an entirely competent husband, had complete occlusion of the tubes, and No. 14 not only had complete occlusion but her husband had not a spermatozoon to his name! Perhaps her household was the more content, after all, as neither partner could justly point a finger at the other!

Results of history and general examination.

The unsuccessfully treated patients ranged in age from 20 to 39, with an average of 29.5; the successful ones ranged from 21 to 35, with an average of 28.2, giving only a slight advantage to youth. The average age of mothers of first babies in California is 23.9. The average years of married life of the unsuccessful was 4.8, and of the successful only 3 years. The obvious though not necessarily correct conclusion is that it does not pay to wait too long.

Mindful of the work of Evans of the University of California, Donald Macomber of Boston, Blair

*Read to the Section on Obstetrics and Gynecology at the Fifty-second Annual Session of the California Medical Association.

Bell of England, and others, I have tried to connect sterility with dietary deficiencies in these patients, especially in the more recent ones. I have looked especially for failure to take fresh vegetables, lettuce, oranges and milk, but in not a single instance have I been able to suspect that vitamin deficiency or lowered calcium intake was a serious factor in the individual's problem. These patients are practically all of the better class and fresh food is so easily obtained in California that this series may not represent a typical group.

Of 150 sterility patients, 43 per cent had abnormal menstrual periods, usually either irregular or small, or both. This percentage seemed much too high until I counted alphabetically for comparison 150 primiparous obstetric patients. Judged by the same standards 33 per cent of these patients showed similar trouble, so the difference is not great. Similarly, 16 per cent had more than moderate leucorrhea, and on examining the histories of primiparous obstetric patients exactly the same per cent was obtained.

Careful and tactful questions will usually elicit a reasonably accurate statement from the patient as to sexual reaction. This apparently has no direct bearing upon this problem however, as 55 per cent of our successful patients had poor reaction or none at all, while 72 per cent of the failures had normal reaction. Nevertheless, the question seems useful as it frequently leads to other information of more direct value such as pain, reluctance, frequency, etc., regarding which the quiet and considerate advice of the physician may mean much to the patient, regardless of the solution of the main problem. Incidentally, and to my surprise, infrequent exposure to pregnancy has been a definite factor in a good many of these patients, and this should always be corrected while the patient is under treatment.

As to cervical pathology, 14 per cent had excessive, tenacious cervical mucus, 17 per cent had rather marked erosion, and 57 per cent had marked cervical stenosis, so-called because of a very tight external os long, slender cervix and marked ante-flexion, giving the impression of a stenosis more marked than we are accustomed to feel in the normal patient.

Only one-half of these patients had a fundus of normal size, and half were described as small or very small. Seventy-five per cent had the fundus in normal anterior position, 13 per cent were in the so-called Graves congenital ante-flexion with posterior rotation to about a mid-position, and the same percentage were frankly posterior, i.e. 26 per cent were in abnormal position. The significance of these positions will be considered in a moment.

Pathology of the adnexa was diagnosed in fifteen of these 150 patients, all being chronic, and yet none having definite history of gonorrhoea. Five of these were successfully inflated, but not one of them has become pregnant, except the two who were operated for the double purpose of relieving pain and of increasing their chances for pregnancy. An ovarian cyst, with its attached tube, was removed from one of these, and one tube and ovary showing marked inflammatory change was

taken from the other. Both had tried unsuccessfully for several years to become pregnant but promptly conceived as soon as they recovered from the operations. This is at least suggestive, though we know that patients with old processes do sometimes become pregnant, often to our sorrow and theirs.

Examination after coitus.

It is well known that the normal vaginal reaction is moderately acid, becoming alkaline at or around the cervix. The reaction to litmus is much sharper in some patients and these I describe in my histories as "instantly acid," the acidity sometimes including the external os itself. I have tried to influence this by destroying the vaginal flora then present by iodine, mercurochrome, picric acid, etc., with sometimes the implantation later of some of the yeast preparations. This has been only temporarily or indifferently successful and it often seems necessary to prescribe a douche of sodium bicarbonate before coitus to overcome the acidity which is fatal to the spermatozoa. The statement that the alkaline douche is unnecessary because of the alkalinity of the semen is plainly refuted by the fact that 60 per cent of the patients whose reaction was tested after coitus, no douche being used, were still acid; and also by the fact that in several instances only dead spermatozoa were seen until coitus was preceded by an alkaline douche, after which normal motility was found.

The behavior of the spermatozoa in relation to the cervical mucus is unusually important and I think it is frequently overlooked. The difficulty of securing uncontaminated specimens from the endocervix is overcome by the use of a special alligator forceps, which is much superior to suction or any other method I have seen. This instrument was suggested to be by Edward Reynolds of Boston, who has done so much to advance our knowledge and interest in this subject. Frequently many active and well-formed spermatozoa are found in the vaginal pool, while only a few have penetrated the tenacious mucus of the endocervix and these are hopelessly entangled. Though other conditions be normal, it is asking too much even of the willing spermatozoa to expect them to travel upward through a narrow canal filled with "tanglefoot" and I am convinced that this is one of the real bars to fertility. Examination of the secretions of the endocervix before and after coitus is an essential part of our work, and I am beginning to believe that when there is tenacious mucus, with an excessive number of leucocytes in this secretion, and yet there is no apparent pathology such as erosion or endocervicitis, the condition is probably one of the diverse signs of endocrine disturbance, and we are now attempting its treatment along that line. The condition is frequently associated with a long, narrow cervix, and in these patients we feel we have an unusually definite objective.

We consider this indirect examination of the husband much more valuable than the examination of the condom specimen; and we rarely have any difficulty in securing the examination when it is explained to the patient that it is really not a test of either of them, but rather an investigation into

the reaction of the two individuals upon each other. The reluctance of the husband to be tested or even doubted is thus overcome. This examination is sometimes checked by condom examination in doubtful cases, especially of non-motility. Transportation of the condom specimen in a vacuum bottle would be more satisfactory if patients could be persuaded that neither frozen nor parboiled spermatozoa are at their best.

Eighty-nine of these patients were examined within one hour after coitus, some of them several times. Of these, 63 per cent showed normal spermatozoa, 11 per cent were fair, 15 per cent were poor, and 11 per cent showed a complete aspermia, 37 per cent therefore being below par. It is significant, though perhaps partly accidental, that only one of these husbands listed below par has so far become a father.

Tubal inflation.

Ninety-two pelvic inflations were done upon fifty-nine of these patients. Sixty per cent were successful the first time, 29 per cent required from two to five trials, and 11 per cent were entirely negative. These were discharged as hopeless. We use the Rubin method, with carbon dioxide gas, as developed by Reuben Peterson and John W. Sherrick, of Ann Arbor, the latter now being my associate, much of the work incorporated in these notes being his.

Not the least useful feature of testing the patency of the tubes is the possibility of determining at once that some patients are practically hopeless because of closed tubes, thereby saving the time and cost of futile non-operative treatment. One test is not sufficient, as shown by the number in this series who were successful after an initial failure. While it is theoretically possible that the pressure of the gas may actually open tubes which are tightly closed, it seems more probable that uterine muscle spasm, causing a temporary occlusion of the uterine ends of the tubes, is a frequent cause of the apparent failure of the gas to go through. We think it possible that the gas goes through on the second attempt because of the lessened apprehension of the patient. The method in detail is not given here since it has so frequently been described in recent papers, though I may urge that if the gas be liberated very slowly, there seems to be less tendency to spasm and less pain. We have never had the slightest evidence that infection might arise from the entrance of the canula or the gas, though in one instance acute symptoms on the right side greatly concerned us for a day or two until they were found to arise from an appendix, a coincidence which might have been embarrassing if not demonstrated. Patients leave the office in half an hour or so after the test and complain very little of pain later. I consider this test the most valuable addition to our resources in many years, but largely as a means of diagnosis rather than of treatment. Only one of the successful patients became pregnant as an apparent result of inflation, everything having failed for nearly a year and pregnancy following immediately after the first inflation. In this instance the pressure rose to 200 many times before the gas

finally went through and we have thought that perhaps the tubes were thus actually opened, though coincidence must be admitted.

General results.

Of the 150 consecutive sterility patients, eighteen did not return after the first interview and general physical examination. Thirty-four were incompletely examined or treated, some moving away, some having incidental illness, and some failing to complete the treatment for reasons unknown to us. (Two of these have just reported missing a period and are probably pregnant, but are not so included because still uncertain.)

Of the remaining ninety-eight, seventeen were discharged as hopeless, or nearly so; and it is interesting to note that eleven of these were so considered because of failure on the part of the husband, while six were dismissed because of closed tubes. Several of these were advised to adopt babies and did so at once, to their great happiness.

Thirty-nine of the remaining eighty-one received fairly complete treatment and must be considered failures. The other forty-two have become pregnant, apparently as the result of treatment. The percentage of success, excluding those who were not treated at all or only partially treated, but including those whom examination showed to be hopeless, is therefore 43; if the hopeless ones are excluded, as they should be, the percentage of demonstrated success is 52. The time interval from beginning treatment to the first missed period varied from one to thirteen months, with an average of 4.7 months.

Twenty-four of the successful patients apparently required and received dilatation of the cervix. This was done in nearly all cases by the negative pole of the galvanic current, this method having replaced, in our office, surgical dilatation. It causes very little pain as a rule, saves the expense and time of hospital and anesthetic, and so far has been perfectly harmless. It is the only use I make of electricity, except for the thin electric cautery in the treatment of cervical erosion. Incidentally, it has usually relieved severe spasmodic dysmenorrhea when present with stenosis, and patients have often expressed themselves as repaid by this, even if they have not been successful in their major quest. I do not consider curettage a part of the routine treatment of sterility.

Ten of the successful patients received endocrine treatment, chiefly thyroid, and but little else except measures similarly intended to bring their general condition closer to par, such as removal of septic tonsils and teeth, appropriate tonics, etc. Reynolds and Macomber of Boston have frequently asserted that fertility is a relative thing and my experience strikingly confirms this statement.

Five times as many of the failures had excessive tenacious cervical mucus as did the successes, and about 60 per cent more had very small undeveloped uteri, suggesting that when these two conditions are found together, the outlook is less bright. Conversely, the patient with normal mucus, normal fundus and patent tubes, regardless of the tightness of the cervix, leucorrheal discharge, erosion and vaginal acidity, all of which are amenable to

treatment, may be considered a little better than a 50 per cent risk, provided her husband is a competent partner.

CONCLUSIONS

1. Sterility patients do not differ greatly from the general average of primiparous obstetric patients in menstrual abnormalities or leucorrheal discharge, but are about five years older than the average primipara.

2. Knowledge of sexual reaction is of no direct value in the treatment of sterility, but indirectly is frequently important.

3. The time-honored alkaline douche before coitus is of definite value when the vaginal reaction is highly acid and especially when this reaction includes the cervix.

4. Cervical pathology is a frequent and fairly favorable finding as it can usually be corrected, often with immediate results; excessive and tenacious cervical mucus is the most difficult feature, especially when unaccompanied by apparent cervical pathology.

5. The infantile uterus is less likely to become pregnant, especially when partly rotated backward and the cervix held high out of the seminal pool by a short anterior vaginal wall; frank posterior positions are less unfavorable as they can often be corrected temporarily with a pessary, with fair chance for success.

6. Adnexal pathology (10 per cent), carries a bad prognosis unless operated, even when the patency of one or both tubes can be demonstrated, but the prediction of success should not be made even when operated.

7. Examination of the woman post-coitus, and tubal inflation are indispensable for diagnosis and treatment, the latter having greater diagnostic than therapeutic value. Post-coital examination showed poor, few or no spermatozoa in about 35 per cent and only one of these women became pregnant, although their general average of probability was no different from the others. It seems reasonable to believe that an improvement in the quality of the spermatozoa in these husbands might be the deciding factor, fertility being the sum of the ability of the two individuals.

8. About 15 per cent of patients are hopeless and should not be accepted for treatment; of the remainder in this series who received adequate examination and treatment, a little over 50 per cent have proved successful.

350 Twenty-ninth street.

DISCUSSIONS ON THE SYMPOSIUM ON STERILITY

Henry Parker Newman of San Diego—I cannot speak too highly of the statements made. They are interesting, valuable, and I wish to congratulate the essayists on this very opportune symposium.

If criticism can be offered in any way, possibly it is done on the matter of statistics. Statistics are sometimes misleading and particularly when they are taken largely from our large civic centers, or rather, large cities, where our clinics are visited mostly by members of the laboring class, to a large extent of foreign blood, and not of our native

population. Syphilis is a serious factor and perhaps predominates more largely in that class.

We also must bear in mind that we have mechanical defects to deal with that are not strictly congenital. They often are referred to as infantile developments present at puberty or consequent to puberty, but which constitute an arrested development at puberty. A woman may have a fairly well developed but not normally developed uterus. We find a small narrow cervix with more or less stenosis and closure of the external os. As Loomis pointed out, this is a factor of considerable moment in sterility, because of the obstruction of the canal by a mucous plug.

Displacements, in their relation to sterility, I think, should be considered differently; that is, from the standpoint of the type of development that I have just spoken of, and that of the woman who has borne children. The same is true of infections. The difference is considerable between the nullipara and the multipara.

F. R. Girard of San Francisco—I wish to congratulate the men of this section who have given us these very able papers, and at the same time congratulate the section on the idea of having the symposium on one special subject. It seems to me that we have demonstrated today that this idea is an excellent one. We have obtained a great deal more information than usual out of this meeting by having papers on this one subject only.

The Rubin test has certainly brought a solution of the sterility problem much nearer. I read a short time ago of a very simple thing which can be used in the office without the use of gas tanks, substituting for it simple air inflation. Cody of New York has described this method. (Description of apparatus.) There is no reason why air should not be just as safe as gas, and the apparatus can be rigged up very easily.

It is very interesting to learn that the incidence of sterility in the male seems to lessen. Formerly, in at least 25 per cent of sterile women, the husbands were found to be sterile. This was as far back as five to six years ago. Recent investigations show that 10 per cent to 15 per cent of the men are sterile. It shows that the treatment of gonorrhoea and its prevention are bearing fruit.

Loomis' paper contained something which we do not all agree with, and that is that cervical stenosis plays such a large part in sterility. He has come to the conclusion that 50 per cent have to be dilated. Practically all women who come for treatment of sterility have gone through years of treatment, many of them have been operated on and dilated. But only when we go after the tubes do we get results. Twenty-five per cent to 40 per cent of sterility is due to tubal conditions.

Titian Coffey of Los Angeles—The question of sterility appeals to me very largely from the sociological standpoint. I am not only interested in what causes sterility but in the effect sterility will have upon the nation at large.

It is rather a hard fact to realize that the average native white American woman has very few children. We no longer see the large families of six, eight or twelve children. We see one, two, or possibly three in the family. Our large families are among our foreign population, so that the native-born American woman is not doing her duty to the community at large by not bringing an American child into the world.

When we take into consideration the shifting of the population from the country to the city, we find in the first place that many women are not prepared for motherhood. They do not want children; they want a good time. They want to eat too much and drink too much. Then there are the others who have abortions induced, and again others who do not want children at all and use every means to prevent conception, but who, later in life, would

give their souls to have children when some pathological condition on the wife's or husband's part, as an effect of their social life, makes it impossible for them to have children. Therefore, from that standpoint, it is the duty of the profession to lay stress, and very great stress, upon this fact: that the American woman should be impressed that she should have a larger family while she is in the child-bearing period.

This social problem is interesting from another standpoint also—the financial one—regarding the increased cost of living and the difficulty of raising and educating children. From that standpoint it is necessary at some future date for the Government to take hold of this problem and to stimulate the growth of the Nation in that way. It has been taken up in Germany and France, and America must bend her efforts in the same direction.

Chiropractor Liable for Care, Skill and Knowledge in Diagnosis.—Chiropractic quibbling may not avail a chiropractor in Wisconsin, who through negligence, ignorance or unskillfulness fails to diagnose the disease from which his patient is suffering, according to a decision of the supreme court of Wisconsin, April 3, in the case of Kuschler vs. Volgmann; and in diagnosing a case, a chiropractor must exercise the care and skill that is usually exercised by a recognized school of the medical profession. The fact that chiropractors abstain from the use of words like "diagnosis," "treatment" or "disease," said the court, is immaterial. What they hold themselves out to do and what they do is to treat disease, and the substitution of words like "analysis," "palpation" and "adjustment" does not change the nature of their act.

The plaintiff, suffering from nausea, a nervousness and headache following a head injury, applied to the defendant, a chiropractor, in September, 1918, for relief and cure. The chiropractor, believing that the nervousness and headache were due to a derangement of the stomach, treated him accordingly. Treatment proved unavailing, and the chiropractor advised the plaintiff, in May, 1919, to go West, in the hope of relief. The plaintiff did so, but the headaches and dizziness, from which he continually suffered, became more severe, and finally he became at times blind. Sept. 10, 1919, the plaintiff presented himself for treatment at a hospital in Chicago, and there his malady was immediately diagnosed as a brain tumor. An operation was done simply to relieve the intracranial pressure, for because of the long time the tumor had been allowed to grow, it was impossible to remove it.

The chiropractic defendant was charged with responsibility because of alleged negligence and want of understanding and skill. He demurred to the declaration, on the ground that one who treats the sick and injured is entitled to be judged according to the principles and methods employed by the school or sect to which he belongs, and he claimed that he had treated the plaintiff according to the methods used by chiropractors. The demurrer was sustained in the lower court. On appeal, the supreme court of Wisconsin said that had the complaint been grounded on neglect or unskillfulness in treatment only, the action of the trial court would have been correct. The complaint alleged, however, neglect or unskillfulness in diagnosis. While the duty of diagnosis is ordinarily assumed and performed by licensed physicians, it may be assumed by others, and the defendant having assumed to perform that duty was bound to exercise the care and skill in so doing that is usually exercised by a recognized school of the medical profession. The supreme court, therefore, overruled the demurrer and remanded the case to the trial court for further proceedings.—*Journal A. M. A.*

CHANGES IN WEIGHT IN TREATED SYPHILIS*

By IRWIN C. SUTTON, M. D., Santa Ana, Calif.

In a series of twenty-eight patients treated with bismuth and silver arsphenamin, careful records were made to determine the effect of the treatment on body weight. The patients were nearly all between twenty and thirty years of age and of average height. According to the medico-acturial standards of weight and height, they were nearly all underweight.

Almkvist, in 1921, commented on the loss of weight in patients undergoing treatment with mercury, and with few exceptions my experience with bismuth coincides with his. The drug used was bismutol, tartro-bismuthate of potassium and sodium, put up in 3 gr. doses and procured through the courtesy of the H. A. Metz laboratories.

In each of these twenty-eight patients the weight was recorded, and an intramuscular injection of bismuth was then given three times a week until the usual course of eighteen injections was completed, at which time the weight was again recorded. After a four weeks' rest from treatment, the patient was again weighed. He was then given an injection of silver arsphenamin each week for six weeks. The table below shows the weight of each patient before and after treatment with bismuth, and before and after treatment with silver arsphenamin.

TABLE SHOWING WEIGHT CHANGES IN CASES UNDER TREATMENT WITH BISMUTH AND SILVER ARSPHENAMIN

Case	Weight before bismuth treatment	Number of bismuth injections	Weight after bismuth treatment	Weight before silver arsphenamin treatment (3 gm. doses)	Number of silver arsphenamin injections	Weight after silver arsphenamin treatment	Outstanding features
1	130	18	128	128	6	132	Hepatic
2	142	10	141	140	6	141	Poor tolerance
3	139	10	134	134	6	138	Aneurysm
4	168	28	169	168	4	168	Meningo-vascular
5	132	30	130	131	6	135	Aortitis
6	101	18	100	100	6	110	Latent
7	98	18	92	92	6	112	Late cutaneous
8	64	10	60	61	6	63	Tardy congenital
9	99	20	96	96	6	96	Osseous system
10	105	18	111	108	6	104	Myocarditis
11	113	18	112	112	6	110	Late cutaneous
12	143	18	139	140	6	145	Recur. secondaries
13	163	18	168	168	6	172	Tabes
14	175	6	175	175	6	177	Poor tolerance
15	151	18	148	148	8	148	Early paresis
16	157	18	152	153	8	152	Late cutaneous
17	138	18	135	135	8	138	Meningo-vascular
18	149	18	140	140	6	143	Myocarditis
19	161	20	157	159	6	164	Cardiovascular
20	156	20	151	151	6	160	Visceral
21	97	12	84	84	6	89	Gumma lymph glands
22	162	18	171	170	6	170	Meningeal
23	173	18	168	168	6	174	Latent
24	119	18	116	116	6	118	Early tabes
25	114	34	118	118	6	120	Wassermann fast
26	121	10	119	120	6	128	Ch. Nephritis
27	138	18	137	138	8	143	Gastric
28	147	20	146	146	8	151	Osseous system

When bismuth was given, the weight usually decreased; when silver arsphenamin was given it increased. There were several exceptions, usually in patients with central nervous system involvement. Cases 2 and 14 did not tolerate the bismuth,

* Read before the Section on Dermatology and Syphilology at the fifty-second annual meeting of the California Medical Association, San Francisco, June 22, 1923.

as evidenced by local nodular reactions, and Case 21, that of a frail young woman, showed an alarming loss of weight. After treatment with silver arsphenamin, nearly all patients weighed more than at the beginning of the treatment, though they did not all recover completely the loss incurred during treatment with bismuth. Records of weight made from time to time after treatment was finished, however, showed in nearly all patients a permanent substantial gain.

Patients suffering from syphilis do not differ from any other class of patients suffering from chronic diseases in their general underweight, and a surprisingly large number harbor food-dreads or phobias. Almost without exception, they need a fuller, richer diet. In accordance with the suggestions of Walsh and Myers, I put them on a large carbohydrate and fat diet, with all the protein they can take care of. By systematic overfeeding, the patients gain weight and feel much improved. Food phobias and constipation disappear, and they emerge from a vigorous course of treatment physically and clinically improved.

Response of Persons Vaccinated With Triple Typhoid Vaccine—Walter V. Brem, Los Angeles, and Bertha M. Challis, Pasadena, Calif. (Journal A. M. A., September 1, 1923), record the clinical reactions of 134 persons vaccinated with the "triple vaccine" (1) to immunize them against the typhoid group of diseases; (2) to record the titrations of the serums of 110 of the vaccinated persons, and (3) to report some phenomena observed during the work. Rawlin's strain of *B. typhosus* was used. The vaccine was prepared so that 1 cc. contained the agar grown, heat killed (60 C.) organisms—*B. typhosus*, 500,000,000; *B. paratyphosus* A, 250,000,000; *B. paratyphosus* B, 250,000,000. The vaccine was given by three subcutaneous injections at ten-day intervals, the quantities being, respectively, 0.5, 1 and 1 cc. The results were: No reactions: first injection, 52 per cent; second injection, 49 per cent; third injection, 78 per cent. Mild reactions: first injection, 43 per cent; second injection, 45 per cent; third injection, 21 per cent. Severe reactions: first injection, 5 per cent; second injection, 6 per cent; third injection, 1 per cent. Chills: first injection, 16 per cent; second injection, 14 per cent; third injection 3 per cent. There was no striking difference between the reactions of the four groups. The evidence indicates, therefore, that neither previous vaccination nor a past attack of typhoid fever influences materially the clinical reactions to subsequent vaccination. The most striking phenomenon brought out is that the third injection caused a much smaller percentage of mild and severe reactions and chills than did the first and second injections. Two injections, therefore, seemed to produce a definite relative tolerance for the toxins of the vaccine. Neither a febrile nor an apparent general reaction could be induced by the intravenous injection of heat-killed organisms from the whole twenty-four-hour growth on two agar slants. A severe reaction, however, was induced by the living organisms from one agar slant. The same strain of typhoid organisms caused marked febrile reactions in rabbits not previously inoculated when the heat-killed organisms of one-half the growth on one agar slant were injected intravenously. Vaccination with triple vaccine stimulates marked production of agglutinins for each of the three organisms. Lytic bodies against *B. typhosus* and *B. paratyphosus* A. are frequently present in normal and immune human serums, and they may interfere seriously with agglutination test made with active serums. They are not found in immune rabbit serums.

REPORT OF A CASE OF SPOROTRICHOSIS*

By V. R. MASON, M. D., and K. P. FROST, M. D.,
Los Angeles.

Although the medical profession of California is familiar with several types of fungus infection of human beings, especially coccidioidal granuloma, it may not be without interest to report an instance of sporotrichosis which we have observed during the past months.

A white woman, 53 years of age, consulted a physician on account of nodules on the left thigh. The present illness began in July, 1922, when the patient first noticed a small nodule on the left thigh just above the knee. This appeared about a month after she began to use a fiber brush to scratch her lower extremities on account of itching. Gradually more nodules appeared and when the patient consulted one of us in October, 1922, there were two small nodules below the knee and a series of cutaneous and subcutaneous nodules extending from the knee to the groin. The cutaneous nodules were firm, purplish, and not tender. One was broken and exuded thick, tenacious pus. The largest nodule was about 3 cm. in diameter. At places a thickened cord could be felt connecting the nodules. The general physical examination was negative. The urine and blood counts were normal. Wassermann's reaction with serum was negative. A needle was inserted into a nodule and the material obtained was streaked on glucose-agar and Sabouraud's medium and the tubes were kept at room temperature. At the end of twelve days colonies appeared. They were white at first, but quickly became fuliginous. A hanging drop preparation showed irregularly septate mycelial threads with numerous singly contoured conidia arising either laterally or terminally or lying free in the medium. A denticule was present at the point of insertion. The organism was studied by Roy Hammack and was found to be a sporothrix both culturally and morphologically. A section of a nodule was removed for histologic study. It showed chronic infection of the subcutaneous tissues, a few giant cells and some down-growth of connective tissue septa. The patient was put on large doses of iodide of potash and on three occasions was given exposures to Roentgen rays. In spite of treatment the lesions progressed and frequent attacks of fever with great swelling of the leg occurred. In June, 1923, eleven months after the onset of the illness, a nodule appeared under the skin of the forehead. It was firm, painless, not moveable and probably arose in the periosteum of the frontal bone. An X-ray of the lungs showed no abnormality. The patient died July 15, 1923. Autopsy and cultures confirmed the original diagnosis.

SUMMARY

A woman of 53 developed an indolent lymphangitis with nodules in the right thigh. A sporothrix was grown from one of these nodules. The disease progressed in spite of treatment with iodides and

*Presented to the Section on Medicine at the Fifty-second Annual Session of the California Medical Association, San Francisco, June, 1923.

X-rays. Eleven months after the beginning of the disease a firm nodule appeared on the forehead, probably arising from the periosteum.



DISCUSSION

Schenck in 1898 grew a fungus from a subcutaneous abscess. The culture was submitted to Erwin F. Smith, who classified the organism as a sporothrix. In 1900 Hektoen and Perkins recovered the same organism from a similar lesion and gave it the name *Sporotrichum schencki*. Following the reports of De Beurmann and Gougerot, which appeared a few years later, the disease was recognized in many parts of the world. Sabouraud observed one of De Beurmann's patients and suggested the use of iodides in treatment; a therapeutic suggestion which has been of great value.

A few remarks should be made concerning the organism, its method of access into the body and the nature of the lesions produced.

According to volume XXII of the Sylloge Fungorum Omnium of Saccardo, there are 160 species of *Sporotrichum*, 39 of *Rhinotrichum*, 63 of *Trichosporium* and 7 of *Rhinocladium*. Most of the fungi described as *Sporotricha*, pathogenic for man, on account of the presence of denticles at the point of insertion of the conidia and the early develop-

ment of a dirty brown pigment should be placed with the species *Rhinocladium*. Botanically the only *Sporotrichum* pathogenic for man is the *Sporotrichum carougeaui*. Two fungi formerly classified as *Sporotrichum dori*, De Beurmann and Gougerot, 1905, and *Sporotrichum dispar* (Vidal, 1882) should be studied again. The latter certainly, and the former probably, belong to the genus *Norcardia*. The remaining fungi which have been obtained from sporotrichotic lesions in human beings and classified as *Sporotricha* fall into the genus *Rhinocladium* for reasons presented above. Up to the present time, therefore, the fungi described as the etiologial agents of clinical sporotrichosis should be tabulated as follows:

Sporotrichum carougeaui (Langeron, 1913).

Rhinocladium asteroides (Splendore, 1908).

Rhinocladium beurmanni (Matruchot and Raymond, 1905).

Rhinocladium councilmani (Wolbach, Sisson and Meir, 1917).

Rhinocladium gougeroti (Matruchot, 1910).

Rhinocladium indicum (Castellani, 1908).

Rhinocladium jeanselmei (Brumpt and Langeron, 1910).

Rhinocladium lesnei (Vuillemin, 1910).

Rhinocladium schencki (Hektoen and Perkins, 1900).

Careful comparative studies of these organisms have not been made so far as we are aware. They have occurred in widely separated geographical areas and some of them have been encountered but rarely, so that it is possible that a definitive classification has not yet been attained.

Clinically the lesions have been classified as localized, generalized, gummatous, tuberculous and lymphangitic. The fungus apparently gains entrance through a break in the skin. A localized lesion forms and the infection is then propagated by means of the contiguous lymphatics or the blood stream. In some instances of disseminated infection, the initial lesion or chancre could not be found and the infection was probably distributed by the blood stream to distant parts. The essential lesion is an indolent, cutaneous or subcutaneous nodule which eventually ulcerates and discharges its contents through the skin. The actual necrotic area is very small compared to the size of the lesion and the discharged material is small in amount. In the lymphangitic form the nodules are usually connected by a firm cord, a circumstance of great importance in diagnosis. In the disseminated forms the organism has occasionally been cultivated from the blood and practically every region and every organ in the body has been known to contain lesions. According to Langeron, the chief element in prognosis is not so much the number as the location of the lesions. The gummatous and other cutaneous forms cure quickly. The lymphangitic form is more resistant to treatment. Testicular localization indicates advanced generalization and involvement of the mucous membranes is of grave omen. Treatment consists in the administration of iodides by mouth or intravenously, injection of the lesions with Lugol's solution, and the applica-

tion of X-rays. The value of the latter is still to be determined.

(Pacific Mutual Bldg., Los Angeles.)

DISCUSSION

Roy W. Hammack (Pacific Mutual Bldg., Los Angeles)—This case presents unusual features in the distribution of the lesions and in the progression of the disease in spite of active treatment. For while dissemination and even generalized infection with the sporothrix may occur, such findings are uncommon, especially when active treatment such as this patient received is begun early in the course of the disease. Two other cases more recently seen in Southern California, in each of which the lesions were in the hand and arm, have responded rapidly to similar treatment and are now apparently well.

The source of the organism and the manner of infection have been studied and better established than is the case with most of the other mycoses. Meyer and others have shown that spontaneous infection of horses, dogs and rats is not uncommon. Yet very few human cases have acquired the infection from such sources. Also there are only one or two recorded cases of direct contact infection from lesion in a human.

The sporotricha grow saprophytically on vegetable matter and infection usually occurs by introduction of the organism from such a source. In both of the cases just mentioned infection followed injury of the hands by rose thorns.

Hypodermic General Anesthesia—Eugene R. Lewis, Los Angeles (Journal A. M. A., October 13, 1923), reports his individual experience covering more than fifteen years' use of scopolamin and morphin in conjunction with local anesthetics in nose, throat, and ear surgery. He has used scopolamin and morphin anesthesia in operating on patients suffering from active pulmonary tuberculosis, renal tuberculosis, lymphatic tuberculosis, bone tuberculosis, pyelonephritis, nephritis, diabetes, anaphylactic asthma, toxicosis, hyperthyroidism, hypertension, hypothyroidism, carcinoma, endocarditis, and myocarditis. Never has a death followed its use. Certain disquieting symptoms occurred in relatively rare instances, tremor, tachycardia, and palpitation. Never has a patient exhibited these symptoms to a degree which interrupted the prosecution of operative work. In very rare instances, excitement and delirium of mild degree are encountered. Lewis values this method of anesthesia because of its safety, its ease of administration, its applicability to cases in which contraindications exist as to the use of ether, chloroform or nitrous oxid, its drying effects on mucous membranes, its adequacy for any operative procedure, and its freedom from unpleasant after-effects. He states very specifically that, while he regards this form of narcosis as safe in experienced hands, he advises against its indiscriminate use and urges the selection of small doses by the beginner until he has acquired thorough familiarity with the effects of these drugs.

A Study of the Action of Calcium in Experimental Cocain Poisoning—Experiments made by Soma Weiss, New York (Journal A. M. A., October 13, 1923), to determine whether calcium salts exert any antagonistic action to that of cocain on the heart show that calcium chlorid exerts no antagonistic action toward that of cocain on the frog's heart, but, on the contrary, the combination is more toxic than is an equal amount of cocain alone, presumably because of the more rapid absorption of the hypertonic solution. From the results of these experiments, as well as those of Karl Mayer himself, it would appear that there is no evidence that calcium salts exert any antagonistic action to that of cocain.

POST-ARSPHENAMINE ERUPTIONS*

WITH SPECIAL REFERENCE TO ETIOLOGY AND TREATMENT

By HIRAM E. MILLER, M. D.

From the Department of Dermatology, University of California Medical School, San Francisco.

The prevention and successful management of the eruptions associated with or following the ingestion of the various arsphenamine products are among the most baffling problems with which the medical profession have to contend. They are encountered by all those whose clientele include a considerable number of syphilitics.

In the last two and one-half years I have treated eighteen patients with post-arsphenamine eruptions of varying severity. Some of these were patients to whom I had administered arsphenamine. The others came to Howard Morrow, to the skin clinic at the University of California Medical School, or to me after the development of their eruptions. From a series of this type, it is impossible to draw any conclusions as to the incidence of such cutaneous reactions. They do, however, give one some insight into their etiology and most successful mode of treatment.

DEFINITION

Under the term post-arsphenamine eruptions are included all of the cutaneous lesions associated with, or following, the ingestion of arsphenamine and neoarsphenamine. It includes urticaria, herpes simplex, simple erythema, macular or maculopapular rashes, lichenoid eruptions and exfoliating dermatitis. At times, the eruptions may simulate any of a number of dermatological entities. It does not include the eruptions occurring around the site of injections.

INCIDENCE

Moore and Keidel report a series of 47,000 arsphenamine injections without the simultaneous use of mercury. They had twenty-one cutaneous reactions in this series, or one in 2238 injections. Lees of Edinburg gave a series of 36,000 injections with mercury simultaneously administered in which there occurred ten severe eruptions and about the same number of minor cases. This is an incidence of one in 1850 injections. Stokes reports thirty-eight skin eruptions in a series of 44,000 injections given in the hospital, with mercury simultaneously administered. This higher incidence of one in 1158 injections is likely more nearly correct, in view of the fact that the Stokes patients were all treated in the hospital where minor eruptions would be more readily noticed. This is found to be true in an analysis of these cases. Of the twenty-one patients of Moore and Keidel, ten were of minor importance; of the twenty of Lees, ten also were of moderate severity; while of the thirty-eight cases of Stokes, twenty-eight were of only mild severity. The simultaneous administration of mercury seemed to play little or no part in the production of the skin eruptions in these cases.

CLASSIFICATION

A classification of the eruptions provoked by

*Presented to Section on Dermatology and Syphilology at the Fifty-second Annual Session of the California Medical Association, San Francisco, June, 1923.

arsphenamines is a difficult task, due to the many types and degrees of dermatitis encountered. Stulmer gives us the following simple, but comprehensive classification. It seems to be fairly satisfactory:

1. Acute Vasotoxic Arsphenamine Dermatitis.

These eruptions appear immediately or within a few hours after treatment. He includes in this group the acute erythematous and urticarial lesions and so-called "fixed" arsphenamine eruptions. He believes that certain small areas of the skin are hypersusceptible to certain toxic properties in the arsphenamine molecule in these cases.

2. Sub-acute Anaphylactoid Dermatitis.

These reactions appear in from six to twelve days after the first injection of arsphenamine. Even though the second and third injections have been given, they are not believed to have had any effect on the causation of the eruption. The author believes that this form of eruption is similar to serum sickness, and that subsequent injections of arsphenamine can be given without danger. The rash and temperature curve are those of serum sickness.

3. Chronic Arsphenamine Dermatitis.

(a) Early. This form develops immediately after the fifth or sixth injection.

(b) Late. This type may develop from a few weeks to a few months after the completion of a course of treatment.

The clinical course of the early and late forms may be similar. They begin as apparently harmless erythematous eruptions on the extensor surfaces and may end as a severe generalized weeping and exfoliating dermatitis from which the patient may die. The author lays emphasis on the fact that after the subsidence of the eruption, a dermatitis remains for some time in the areas of predilection of seborrheic dermatitis. He believes that a patient with a seborrheic skin is more susceptible to arsphenamine eruptions than is a normal individual.

Of the eighteen cases in my series, one is of the first group, two of the second group, and fifteen of the third group. Of those in the third group, fourteen developed early, appearing a few days after the third to the sixth injection. The following chart will bring out the important points in these eighteen cases:

All of the patients in this series were in the late stages of the disease with the exception of two who were non-luetic. I do not think that we can place any importance on the late stage of the disease in these patients, inasmuch as the presence of the disease does not seem to be necessary to the development of the eruptions. The largest number were between 30 and 40 years of age. The youngest patient was a congenital luetic 13 years of age; the oldest was a man of 47.

The largest number of eruptions developed after the third injection of arsphenamine, but the most severe ones developed after a course of six or more injections. In my experience, the longer the time interval between the ingestion of arsphenamine and the development of the dermatitis, the more severe and prolonged is the eruption.

The milder eruptions cleared spontaneously, while under local treatment, in about a week's time. The severe eruptions cleared in one to five months under local treatment and in three to six weeks under the use of sodium thiosulphate orally and intravenously. This form of treatment will be taken up in detail later in this paper.

Practically all of these patients received their arsphenamine without the simultaneous administration of mercury. Some authorities assume that mercury may injure the kidney in such a way as to prevent the normal elimination of arsenic and thus predispose the patient to arsenic dermatitis. An analysis of the cases of Moore and Keidel, of Lees, and those of Stokes, seems to prove that this is not the case. Mercury simultaneously administered with arsphenamine apparently plays no part in the development of the arsphenamine eruptions.

Eleven of these patients received neoarsphenamine.

IMPORTANT FACTS IN 18 CASES OF POST-ARSPHENAMINE ERUPTIONS

Case	Sex	Age	Stage of Disease	Preparation Used	No. Inj. Before Dermatitis	Mercury Therapy	Previous Dermatitis	Duration of eruption	Severity	Treatment
1	f	13	congenital	Neoarsphenamine.	8	none	Seborrheic Dermatitis ears and scalp.	3 months	marked	local only
2	m	42	late	Arsphenamine	3	none	Seborrheic Dermatitis of thighs and groins.	2½ weeks	moderate	local only
3	m	39	late	Arsphenamine	3	none		1 week	mild	local only
4	m	39	late	Arsphenamine	4	none		1 week	mild	local only
5	m	38	late	Arsphenamine	6	3 mercury salicylate		1½ weeks	mild	local only
6	f	42	late	Neoarsphenamine.	6	none		3 months	died	local only
7	f	26	late	Neoarsphenamine.	1	none		3 weeks	moderate	local only
8	f	40	late	Arsphenamine	12			3 months	marked	local only
			C. N. Shoss							
9	m	32	late	Neoarsphenamine.	4	none	Very little hair on scalp. Much scurf.	5 months	marked	local only
10	f	42	late	Neoarsphenamine.	6	6 mercury salicylate	Much scurf in scalp.	3 weeks	marked	local and sod. thiosulphd. intravenously
11	f	27	late	Arsphenamine	3	none		3 weeks	moderate	local only
12	m	39	non-luetic	Neoarsphenamine.	2	none	Had a severe generalized Seborrheic Dermatitis.	1 month	marked	local and sod. thiosulphd. intravenously
13	m	47	late	Arsphenamine	6	none		5 weeks	marked	local and sod. thiosulphd. intravenously
14	f	26	non-luetic	Neoarsphenamine.	3	none	Asthma and eczema.	5 weeks	marked	local and sod. thiosulphd. intravenously
15	f	24	late	Neoarsphenamine.	3	none		1 week	generalized urticaria	local only
16	f	28	late	Neoarsphenamine.	3	none		1 month	moderate	local only
17	m	38	late	Neoarsphenamine.	6	none	Very little hair on scalp. Eczema of legs.	6 weeks	marked	local and sod. thiosulphd. intravenously
18	m	34	late	Neoarsphenamine.	4	none	Very little hair on scalp. Much scurf.	3 weeks	marked	local and sod. thiosulphd. intravenously

mine and seven arsphenamine. This may give a false impression as to the relative incidence of the eruptions from the two preparations. However, when one considers that neoarsphenamine is used almost exclusively in private practice in this vicinity, it will help to correct this impression. From my experience, I believe that eruptions develop as frequently after neoarsphenamine as after arsphenamine.

ETIOLOGY

The literature of the last few years has been replete with possible causes of these eruptions and of arsphenamine reactions. Toxic properties in the drug itself were at first looked upon as the main etiological agent. Improper alkalization, oxidation, impurities in the water and the tubing employed have all been definitely demonstrated as being responsible for reactions of varying severity. It is, however, very doubtful if any of the above are ever responsible for skin eruptions; the fault, as Ehrlich expresses it, seems to lie in the patient himself. Thom asserts that it is not a question of how the drug reacts on the patient, but how the patient reacts to the drug. Stuhmer and Lees have mentioned the possible role of seborrheic dermatitis. Stokes believes that chronic focal and intercurrent infections play an important part.

Six of my patients showed definite evidence of seborrheic dermatitis and had been treated for it at intervals prior to receiving antiluetic therapy. One of these had a severe generalized seborrheic dermatitis and was clinically and serologically free from syphilis. He was given neoarsphenamine, due to an error in diagnosis. After two injections, the skin condition changed into a severe generalized exfoliating dermatitis.

One patient had asthma. Due to bony changes in the nose, she was erroneously diagnosed as being a luetic and given neoarsphenamine. Three weeks after the third injection she developed a severe exfoliating dermatitis. Asthma is believed to be due to some hypersusceptibility or idiosyncrasy. Dermatitis or other skin changes are often associated with it and are undoubtedly due to the same cause. In this individual case, there was also an associated idiosyncrasy to arsphenamine. The arsphenamine did not, however, in any way affect her asthma.

Perhaps seborrheic dermatitis, like the cutaneous changes often associated with asthma, is an external manifestation of some hypersensitiveness, idiosyncrasy, or allergic instability. Focal or intercurrent infection may pave the way for or be the basis of this idiosyncrasy. It certainly plays a part in some cases of seborrheic dermatitis. One has but to recall the patients with seborrheic dermatitis whose eruptions have resisted all local and internal treatment only to clear over night after the removal of an abscessed tooth or other focus of infection.

I believe that the cause of post-arsphenamine eruptions is an idiosyncrasy or susceptibility of the patient to arsphenamine and is not due to the toxic properties of the drug or its mode of administration. I further believe that seborrheic dermatitis is an external sign of this susceptibility and is a

warning which we should heed. I have learned to look upon all cases of seborrheic dermatitis as potential cases of arsphenamine dermatitis. I make it a point to be sure that they are clear of the dermatitis before arsphenamine is administered. If this procedure is followed I feel certain that it will lessen the incidence of post-arsphenamine eruptions.

TREATMENT

Local Applications

The external manifestations of the disease can only be treated symptomatically. No single remedy will give satisfactory results in all cases. For the milder eruptions, calamine lotion or a simple dusting powder will give the best results. In the more severe cases, calamine liniment, zinc oxide ointment or Lassar's Paste without salicylic acid may be used. In general, the lotions and powders cause the eruptions to involute most rapidly, but the patient will prefer the paste or ointments as they will relieve the dryness of the skin which the lotions accentuate. In the hands of some, the so-called colloidal bath has given excellent results. I have had very little success with it. Stimulating medications should not be used in any form except for the localized areas of dermatitis that may persist after the involution of the generalized eruption. It should always be borne in mind that the dermatitis is an external manifestation of an internal condition. All that we can hope to do is to help the skin, with soothing applications, withstand an attack from which it is already the loser. Any therapy that is to reach the cause of the disturbance must be given internally.

INTERNAL MEDICATION

In 1920, Revaut of France described the use of sodium thiosulphate orally and intravenously in the treatment of arsenical dermatitis. In 1922, McBride and Deunie of Kansas City described their experiences with this mode of treatment.

The theory is that sodium thiosulphate, a derivative of the non-metal sulphur, converts the metal arsenic into non-toxic insoluble sulphides, which are in time eliminated from the body. Whether this is what actually happens in the body is difficult to say. The interesting observation is that it greatly shortens the course of the eruptions.

Eight cases in my series were treated with sodium thiosulphate, intravenously and orally. They all showed marked improvement under this treatment. They did not, however, begin to improve until after the fourth or fifth injection, while the most marked improvement was noticed a day or two after completion of the course of treatment. This retarded evidence of improvement may be due to the fact that it takes some time for the body to repair the damage already done by the arsenic. Saline cathartics and large amounts of water by mouth tend to hasten elimination.

Sodium thiosulphate should be used in all cases of arsphenamine dermatitis that fail to improve under local treatment after a period of a week or ten days. I think it advisable to wait this length of time, in view of the fact that a large percentage of the cases will clear spontaneously. No

toxic or disagreeable symptoms, due to the drug have been experienced; nevertheless, unnecessary intravenous therapy of any kind should be avoided as much as possible. This type of therapy is adapted to those cases classified by Stuhmer, as group 3, or the chronic arsphenamine dermatoses.

The technic of administration is that of neoarsphenamine. The drug for intravenous use must be pure and must be sterile. It has been put on the market by the H. A. Metz Laboratories in air-tight, sterile ampules, similar to arsphenamine. A pamphlet of instructions accompanies each course of treatment. In general, the injections are given at twenty-four hour intervals for the first four smaller doses, and at forty-eight hour intervals for the two to four succeeding larger doses. The dosage is 0.3, 0.45, 0.6, 0.9, 1.2 and 1.9 grams respectively. It is given intravenously by the syringe method dissolved in ten to twenty cubic centimeters of sterile distilled water. This is supplemented by one gram of the drug given orally three times a day dissolved in water.

One course of treatment, consisting of six to eight injections, will generally accomplish as much as can be expected from the drug. Many of the patients will have a few areas of dermatitis remaining after the completion of the course of sodium thiosulphate. These are generally in the distribution of a seborrheic dermatitis and clear in a few weeks with the use of local, mild antiseborrheic remedies.

Lees recommends the use of sublimated sulphur, 30 grams three times a day for its neutralizing effect on the arsenic. The drug given by mouth cannot accomplish the same results as the derivatives of sulphur given intravenously. It may be given in this way, however, when it is impossible to obtain the sodium thiosulphate for intravenous use.

INFLUENCE OF POST-ARSPHENAMINE ERUPTIONS ON THE PATIENT'S SYPHILIS

The blood serum during an attack of dermatitis is often found to be negative and it may remain so for some time afterwards. A recent article of Gougerot warns us of the danger of assuming that this is permanent and urges a careful observation of these cases for a number of years.

One case in my series had a negative Wassermann reaction at the time of her dermatitis. It had been strongly positive ten days previously. I was unable to observe her after the dermatitis cleared. Three other cases in which the Wassermann was taken immediately after the disappearance of the eruptions were found to have the same serological findings as before the development of the dermatitis.

FURTHER ANTILEUTIC TREATMENT OF THESE PATIENTS

Practically all of these patients remain intolerant of the drug for months or years after their arsphenamine eruptions. In the severe cases, the danger of a recurrence of the dermatitis is such a serious one that it is advisable to continue the treatment with mercury and iodides. In the milder

cases, if arsphenamine is to be used it should be used cautiously. Intradermal tests with a small quantity of arsphenamine solution will generally tell if the patient still has an idiosyncrasy to the drug. Treatment with mercury and iodide should not be started until all areas of dermatitis have entirely cleared.

SUMMARY

1. Of eighteen patients with arsphenamine eruptions, seventeen of them developed early in the course of the administration of the drug.
2. Seborrheic dermatitis in a patient seems to predispose him to post-arsphenamine eruptions.
3. Arsphenamine eruptions occur as frequently after neoarsphenamine as after arsphenamine.
4. Sodium thiosulphate intravenously and orally greatly shortens the course of the eruptions.
5. Further antileutic treatment in the severe cases of post-arsphenamine dermatitis should consist only of mercury and iodide.

135 Stockton street, San Francisco, Calif.

DISCUSSION

Howard Morrow, M. D., Butler Bldg., San Francisco—It has been our misfortune to have seen many arsphenamine eruptions. Two ended fatally and many were very severe examples of generalized exfoliative dermatitis.

The generalized cases seldom appeared without warning. Nearly all gave a history of a mild eruption following the previous arsphenamine injection. Had this warning been taken, and no other arsphenamine given, many of the severe eruptions might have been avoided. One woman, who previously had developed a severe exfoliative dermatitis from arsphenamine, went for two years without arsenical treatment. After much persuasion on the part of the patient, her physician thought it safe to repeat the arsphenamine. Notwithstanding the fact that two years had passed without treatment and only 0.2 arsphenamine was given, the patient developed a severe generalized exfoliative dermatitis which took two months to clear.

The injections of sodium hyposulphite have been of great value to us, but in some cases even with this type of treatment, the improvement has been slow.

A history of mild eruptions following arsphenamine should be a warning not to repeat the arsphenamine and to treat the patient by other methods.

Samuel Ayres, Jr., M. D., Brockman Bldg., Los Angeles—I heartily endorse the sentiments of Miller and Morrow in urging prompt discontinuance of arsenical medication following the appearance of any erythematous rash. Stuhmer may be correct in his belief that a certain type of eruption is analogous to serum sickness and does not contraindicate the further administration of arsphenamine, but the positive clinical differentiation of this type would no doubt offer some difficulty. I feel that the welfare of the patient demands a more conservative attitude. It should be a matter of routine to inquire before each injection whether any rashes or itching followed the last treatment. Itching may be as important a danger signal as an actual eruption. It goes without saying that the acute exanthemata will be definitely ruled out before a given rash is attributed to a drug. I shall never forget a serious epidemic of scarlet fever in a large Eastern hospital, which resulted from the carelessness of the consulting dermatologist in failing to consider this possibility.

A routine phenolsulphonephthalein function test before any treatment is given will sometimes reveal seriously impaired kidneys and warn against the administration of harmful amounts of arsenic or mercury.

I was very much interested in Miller's remarks concerning the predisposing influence of seborrheic tendencies to post-arsphenamine eruptions.

I do not agree with Miller that it is desirable to wait for a week or more following the appearance of a post-arsphenamine eruption before administering sodium thiosulphate. If this drug is harmless, as everyone seems to agree, and if it acts as an antidote to a poison, as experience has apparently demonstrated, then, theoretically, the sooner it is given, the less will be the toxic effects from the arsenic. The skin is not the only tissue which may be affected. I have seen a case of acute yellow atrophy of the liver come to autopsy following the administration of neoarsphenamine.

Albert M. Meads, M. D., Hutchinson Bldg., Oakland—Miller has emphasized the importance of watching for minor skin eruptions, as well as for severe eruptions, following the injection of any of the arsphenamines. The relationship between such eruptions and the amount of salvarsan given at each injection, in our experience, has been noticeable. The syphilitic clinic of Alameda County Hospital has made it a point not to give more than six decigrams of neosalvarsan at a single dose in routine treatment, and we have found that severe reactions of all kinds have not been evident. No severe eruptions have been noticed and but two minor eruptions seen in women following the first injection. Subsequent injections did not aggravate the condition, so there is a question as to the origin of the rash. Clinic cases, of course, are not watched as carefully as they might be, the patient being trusted to report any unexpected occurrence. A severe eruption at least would have been reported to the physician administering the drug, but this has not been the case. About fifty cases a week, men and women, are under treatment at the present time.

In my private work my experience is limited to one case of exfoliative dermatitis occurring after the second dose of neosalvarsan in a non-luetic case, and to a few cases of transient oedema of the lips, face, and other parts, occurring almost immediately after the injection and clearing up quickly under a small dose of adrenalin. Possibly I have overlooked the less pronounced eruptions, but I can say that since adopting less than the maximum dose there has been a decided decrease in reactions in any form in cases under my observation. Certainly Miller's paper will cause me to be more watchful for the less pronounced eruptions and will prompt me to be a little more cautious in pushing arsphenamine in such cases.

Hiram E. Miller (Closing)—I had hoped that in the discussion someone would give us his experience in treating post-arsphenamine eruptions with sodium hyposulphite or the relative number of cases he had seen develop after arsphenamine and neoarsphenamine therapy. Ayers mentions the value of phenolsulphonephthalein function tests. They are of definite value in determining renal function but the post-arsphenamine eruptions are apparently due to a hypersusceptibility to arsenic and lowered renal function plays a minor part. In the eighteen cases in my series, the urine findings were normal in all except two cases, and in these two only for two days during the beginning of the eruption was there any albumen present in the urine.

We should aim to take every precaution to prevent these eruptions and once they have occurred to use every means at our command in clearing them up. Sodium thiosulphate intravenously and orally is of definite value in the treatment of the eruption.

THE MANAGEMENT OF FRACTURE OF THE BASE OF THE SKULL*

By HARRY HYLAND KERR, M. D., C. M.
Washington, D. C.

Fracture of the base of the skull per se has no mortality. Death is due to intracranial injury and not to displacement of the fragments. In the severe crushing injuries with gross bony changes, the accompanying cerebral traumatism is so severe that death occurs immediately or within the first few hours.

In the cases that survive this period, the accompanying hemorrhage or secondary edema is responsible for death from the increased intracranial pressure.

A review of the vital statistics of the District of Columbia for the past twenty years shows a steadily rising death rate from fracture of the skull. Though the total death rate from all causes has fallen off from 21.74 per 1000 in 1900 to 14.77 per 1000 in 1920, the death rate from external and violent means has risen from .74 per 1000 in 1900 to .83 per 1000 in 1920. An analysis of the causes of violent death reveals again a steadily increasing percentage due to fracture of the skull.

In 1900 11 per cent of the violent deaths were caused by fracture of the skull.

In 1910 14.8 per cent, and in 1920 15.9 per cent.

As might be expected, 66 per cent of deaths from fracture of the skull occur in the first four hours after injury. Twenty-four per cent within seventy-two hours to ninety-six hours, and 10 per cent after that time. It is probable that the larger group of immediate or very early deaths cannot be affected by treatment, but there is left an appreciable percentage of cases (33 per cent) that should be improved by a better understanding of the problems involved.

As meningitis was only mentioned as the cause of death in two of all the cases of fracture of the skull, we can assume that in the vast majority this is a negligible factor.

Fractures involving the base of the skull are linear in type. There is no bony deformity, but from the anatomical conditions, they are always accompanied by injury to the basilar dura and intradural hemorrhage. As is well known, the dura over the vault is loosely attached to the bone and usually not injured in fractures in this region, unless there is a depression with indriven fragments. When hemorrhage occurs in fractures of the vault it is produced by tearing of the meningeal arteries that groove or tunnel the bone. In such event the hemorrhage is extradural. The hemorrhage is limited to the immediate injury, and as it advances it dissects the dura from the inner table. In these cases, the accumulation of pressure is gradual, easily associated with the "lucid interval" and manifests itself by localized pressure with mono- or hemiplegia.

The dura over the base of the skull is so intimately attached to the bone that even a slight fracture is always accompanied by injury to the dura and the escape of the resulting hemorrhage into the

* Read before the Utah State Medical Association, June 20, 1923.

subdural or subarachnoid spaces. This hemorrhage may be arterial or, when the dural sinuses are injured, venous. The hemorrhage meets with little or no resistance, and bleeding occurs freely between the dura and the brain. The result is a relatively rapid increase in intracranial pressure.

Most fractures of the base of the skull are compound, in that the paranasal sinuses or the middle ear is involved. This makes itself manifest by hemorrhage from the nose, mouth or external auditory meatus. Linear fractures of the posterior fossa not involving the temporal bone are usually not compound. The communication of the fracture, even indirectly with the outside, of course adds to the possibility of infection as a dangerous complication. It is, however, surprising how seldom death occurs from this factor, and as I have said above, there are only two cases in the statistical study where meningitis was given as a cause of death in the fractures of the skull.

The clinical picture of fracture of the base of the skull is characteristic. The immediate loss of consciousness accompanying the injury due to concussion is followed by a varying degree of mental disturbance that depends on the cerebral injury and the resulting compression. In the early hours, the blanched skin, the clammy sweat, the dilated pupils, and the rapid pulse of the unconscious patient bespeak the immediate contusion of the brain. If compression supervenes from hemorrhage the unconsciousness will continue, but the clinical picture will gradually change. The pulse becomes slow and full, the face and scalp congested, the breath stertorous and labored, and the flaccidity will give way to restlessness and semi-consciousness that make the patient extremely hard to control. The blood pressure in the early stage of concussion is low, but with the onset of compression, the systolic pressure will rise, while the diastolic pressure tends to lag behind. As pressure increases unconsciousness deepens, and the restlessness gives way to deepening coma.

The mechanism underlying these phenomena is well known. With the addition of free hemorrhage within the non-expandible cranial cavity, first the cerebral fluid is displaced, then the venous blood from the thin-walled veins and finally, if the pressure continues to increase, the arteries themselves are obstructed, with the resulting anemia of the brain. In an effort to maintain the cerebral circulation against the increasing intracranial pressure within the skull, the systolic pressure is gradually increased and the cardiac impulse slowed. It is during this period of gradually increasing intracranial pressure that well-directed treatment may save life. If the pressure is allowed to advance to the point where the intracranial pressure rises above the systolic pressure, Kocher's fourth stage of compression develops, and the time for interference has passed.

In the management of cases of fracture of the base of the skull, nothing can be done in the group of severe crushing injuries with immediate death, or death within the first few hours. It is the gross cerebral injuries that cannot be controlled and cannot be repaired that are responsible for the mortality. In the cases that survive this immediate

mortality, control of the complications will definitely reduce the number of deaths. Our aim should be to ascertain as early as possible the degree of intracranial pressure. If it is high and the patient already in the second or third stage of compression, the cerebral circulation is threatened and indications are definite for immediate interference. The situation is a desperate one, and heroic measures may be necessary to control the rapidly increasing intracranial pressure. Here Cushing's decompression operation is useful. Such an operative procedure, however, should add not one ounce more to the load the organism is laboring under. For that reason a general anesthetic, such as ether or even gas-oxygen is definitely contraindicated. Frequently no anesthetic at all will be necessary, but even with a comatose patient any attempt at manipulation or operation will arouse him to a restlessness that will make surgical procedure impossible. The indications are definite for local anesthesia in decompression of the fracture of the base of the skull. The operative area should be infiltrated with one per cent novocain, preceded by a heavy hypodermic of morphine if necessary. A right-sided subtemporal decompression is the operation of choice, though the evidence of maximum pressure elsewhere may justify decompression in that region. The Cushing operation, through a vertical incision and separation of the fibers of the temporal muscle, exposes the skull where the bone is thinnest and most easily removed. A stellate incision of the dura allows the escape of blood and bloody cerebrospinal fluid and decompresses the silent temporal lobe. The resulting brain hernia compensates for the increase of pressure from the accumulated hemorrhage. If a unilateral decompression does not suffice, the procedure should be immediately repeated on the opposite side. If hemorrhage is free, drainage may be necessary. In certain cases a torn sinus, if accessible, can be occluded by a muscle-graft.

In the less desperate type of case, where indications do not point to an extreme pressure, but where the diagnosis of a fracture of the base of the skull is clean-cut, a question of judgment will often decide the life or death of the patient. In such cases we have many guides as to the progress of the intracranial pressure. The old clinical signs of slowing pulse and deepening coma may not be sufficient to tell us definitely enough of what is going on within the skull. Careful and frequent blood pressure readings made by the same observer are of great value. Ophthalmoscopic examination in the hands of an expert may show a gradual advance of pressure in the retina. Again, a carefully performed spinal puncture with or without the use of a manometer will contribute materially to our knowledge of the case. If any of these signs or symptoms indicate a definite and steady rise of intracranial pressure, then our aim should be to control that rise as best we may.

When the signs and symptoms indicate a mild and gradual increase of intracranial pressure, use of hypertonic salt solution may control the situation. The intravenous injection of 100 to 200 cc. of hypertonic salt solution will temporarily reduce brain-bulk and decrease the intracranial pressure.

This effect, however, is temporary and if used will necessarily have to be repeated. Since hypertonic salt solution injected into the intestine has the same effect experimentally, Dowman of Atlanta has suggested the frequent and repeated administration of full doses of magnesium sulphate by mouth. In the treatment of this class of cases he has found a distinct benefit from its use, and, with a very limited experience with it, I can indorse his claim.

When there is a more rapid and more distinct increase in intracranial pressure following the injury in a case of fracture of the base of the skull and where one hesitates to operate, spinal puncture drainage will often suffice. It should be used, however, with extreme caution. If the pressure is at all high and where doubt exists as to the safety, it is probably wise to discard this treatment for decompression under local anesthesia. If, however, spinal puncture is used, it will probably have to be repeated.

Careful observations should be frequently made. If the treatment outlined above does not control the advancing increased intracranial pressure, then operative interference should be resorted to immediately.

In cases of fracture of the base of the skull where immediate compression has been controlled so as not to become excessive, we occasionally see a recurrence of compression several days after injury. In these cases the compression is caused by secondary edema that follows the original cerebral contusion. In these cases the use of hypertonic salt solution or repeated doses of salines may be most effectual. However, as before, if their use does not control the pressure, one should not hesitate to perform a decompression.

The value of decompression in fracture of the base of the skull is still a debatable question. There have been statistics published both for and against its use. Mixster of Boston analyzed the cases for a period of twenty-seven years in the Massachusetts General Hospital. Of the cases treated up to 1900, 9 per cent were operated upon with a total mortality of the entire series of 68 per cent. Of the cases treated between 1900 and 1911, 23 per cent were operated upon with a mortality of 54 per cent. Of the cases treated between 1911 to 1917, 71 per cent were operated on with a mortality of 36.5 per cent. These figures strikingly demonstrate the decrease of mortality where operation was used. His figures again show the value of operation in the early stages of compression rather than operation as a desperate last resort. Of the operated cases where operation was performed within the first forty-eight hours, the mortality was only 41.2 per cent, while in those so treated more than forty-eight hours after injury the mortality was 71 per cent. In a similar study of a small series of cases at the Garfield Memorial Hospital I find that the mortality in cases where operation was not used was just about twice that of the mortality in cases where operation was made part of the treatment. My experience, therefore, convinces me that decompression is definitely indicated in all cases of fracture of the base of the skull that show increasing intracranial pressure. This decompression

may be accompanied by the use of hypertonic salt solution or salines by mouth, by repeated lumbar puncture or finally by subtemporal decompression operation.

CONCLUSION

1. With the exception of the group of cases with severe crushing head injury and death within the first few hours, the mortality in fractures of the base of the skull is almost entirely due to increase of intracranial pressure from early hemorrhage or late edema.
2. Careful observation and repeated notations of the blood pressure, pulse rate, retinal changes and spinal fluid pressure should be made in all cases.
3. A slightly increasing pressure may be controlled by intravenous injection of hypertonic salt solution or the administration of saline by mouth.
4. In the cases with rapidly rising pressure or where the above does not suffice, decompressive operation should be performed under local anesthesia.
6. The use of decompression either by hypertonic salt solution, spinal puncture or operation will definitely decrease the mortality in the cases under consideration.

Reciprocal Responsibility of Health Officer and Other Public Officials—The activities of any public service board should be free from political influence. The ideal condition, so far as such is obtainable, would be to have the service divorced entirely from all interference on the part of those persons holding positions by virtue of their political affiliations. A health board or any other public board, hampered by political machinations, is a travesty on efficiency. Discord and lack of harmony among the members and employes is the immediate and direct result. Aside from internal disruption, which is a corollary of outside interference, there is the more important result of the loss of usefulness in the service to the public. Therefore, to insure a maximum of efficiency, the appointments should be made solely on a basis of merit and fitness, and the term of office determined by results. . . .

Volunteer health organizations have their responsibility. With a reciprocal attitude, they are valuable adjuncts to the activities of the health officials, and, if the program is suggested by the health authorities, they may be eminently useful. But there must exist a mutual appreciation of the functions and prerogatives of both, and an acknowledgment by these auxiliary bodies of the right of domination in health activities by the State board. . . .

Scientific facts on which health work is founded are as certain as those which lie at the basis of astronomy, for example. Both are the practical development and application of fundamental scientific principles and, however divergent in most respects, the physical laws which are operative in one are wholly applicable to the other. (Oscar Dowling, *Journal A. M. A.*, July, 1923.)

Discussion (by C. W. Garrison, Little Rock, Ark.)—Public health is challenging the health officer of today to initiate a program of right living, involving both eugenics and environment. Public health is as distinctly a branch of medicine as is surgery or obstetrics, and a health officer should not only be as highly trained technically in his specialty as the surgeon, but should possess unquestionable honesty, adaptability, courage, leadership, and diplomacy.

THE PLACE OF MANIPULATION AND CORRECTIVE GYMNASTICS IN TREATMENT*

By R. TAIT McKENZIE, Philadelphia, Penn.

I think this meeting is to be congratulated on two things: First, that physiotherapy has now become a definite part of the medical profession by being made a section of the Medical Society of the State. And that is very significant. We are to be congratulated, also, on having had a man like Goldthwaite, who has devoted such a long period of his life to the study of the physiology and the anatomy of posture, to give us such an inspiring and illuminating address as he has this afternoon. Much of the pioneer work in physiotherapy has, unfortunately, come from outside the profession, and we have been slow—too slow—to adopt many of the means of treatment well known to those whose only training has been empirical.

Let me mention two names only: Hugh Owen Thomas of Liverpool was a bone-setter, and from the very beginning of time there have been men who have discovered and successfully practiced the manipulation of joints for the correction of certain morbid conditions because they have acquired that almost instinctive feeling for the breaking down of an adhesion, or for the correction of a misplacement. Fortunately, in the case of Hugh Owen Thomas, this information which he acquired was passed on into good hands, passed on into the hands of Robert Jones, now Sir Robert Jones, his nephew, who, educated and qualified as a surgeon, put into practice many of the things which were taught him empirically by his uncle.

Let us take an example. It is a fact that, after certain injuries of the knee, wrenches or sprains which have been put up in a splint with the knee straight, there is an imperfect recovery, and that the knee remains painful and more or less stiff. Thomas discovered that, if you take a knee in that condition and bend it to a right angle, and then give it a sharp twist, something cracks and the patient gets immediate relief. What happens? Adhesions that had been formed by keeping the knee in a fixed position for a long time were stretched or torn by this simple manipulation, because, when the knee is flexed at a right angle, it is in the most favorable position for rotation. By that manipulation alone he frequently got most striking recovery of function and relief of wearing pain.

Take another instance. It is familiar to all of us who have had to do with injuries about the ankle, to see the ankle maltreated in the examination. Very often the surgeon will flex, extend, and twist it in a more or less aimless way, discovering pains in certain movements and finding that in certain positions there is no pain. But too often he does not analyze the exact reason of the pain. He finds, for example, that if the ankle is extended it is painful, and that if it is flexed it can be moved very freely, without very much pain. Now, if, instead of pump-handling the joint, or without waiting to get an X-ray, he would carefully examine the

attachments of the external lateral ligament, place his finger on the attachment of the anterior fasciculus, or the posterior fasciculus, he would, in a great many cases, be able to make an absolute diagnosis. And then if, in a purely mechanical, common-sense way, the ankle is so strapped that the injured fasciculus cannot be overstretched, there is no reason at all why the joint should not be kept in movement in all other directions, from the very first.

That is also true of the wrist. Most Colles' fractures are due, not to pure accident, but to carelessness or physical ignorance of the fine art of falling. When one has to fall, if fall one must, do not put the arm out straight and fall upon the wrist in that position (indicating). Do not persist in putting up the wrist in such a way that adhesions can become firmly established about the injured capsule and tendon-sheaths and thus cause the greatest amount of deformity and the slowest rate of recovery. If we put the wrist in this flexed position and hold it down by a splint, you will be unable to exercise your flexors. If you try from this position to close your fist, you will see that it is practically impossible. If, however, you put it up in this extended position, and then try to close the fist, the flexors will be found to act almost automatically and can be used practically from the first. If the joint is put up in bad position with the fingers straight, it is impossible to have a quick recovery, because, after the splint is removed, you have to break down the adhesions that are formed during that period of quiescence, that have formed when the tendons are in the worst possible position, and you get a very slow and imperfect return to the normal. If, however, you put it up in the extended position and allow free movements of the fingers from the first, you do not get the adhesions forming at all, or if they do form they are very easily stretched.

It is an interesting experience to feel under the fingers the sensation of a tearing adhesion. An adhesion of a few days' formation will tear almost like blotting-paper. It is a very soft feeling that you get. When it is a little older, it is a rougher, grating feeling; but an old adhesion very often snaps with a very distinct crack.

Another bone-setter of great ability was Whar-ton Hood, and he passed on the information that he had gained in the practice of his art to Frank Roemer, who wrote a book on modern bone-setting for the medical profession, which would do us all good to read, because he explains the contribution that they have made, and shows the reasons for their success.

I could go on with other joints like the shoulder and the elbow, but this will, I think, suffice to show what I mean.

During the war we came across a great mass of cases that crowded our hospitals suffering from deep, lacerated scars. They came in throughout the entire war, particularly in its first years. Some of these wounds were terrible to see, and sometimes a scar which was comparatively small upon the surface had its tentacles spread through the tissues underneath, strangling vessels and pinching nerves, causing acute pain, lowering the circulation, and

* Presented before the joint meeting of the California Association of Physiotherapists and the American Physiotherapy Association, San Francisco, June, 1923.

involving muscle, tendon and bone in a way which was most deplorable in its results. It was for cases of this kind that we felt the urgent need of physiotherapy and that the organized bodies of physiotherapists, both in England and America, made their place. These cases were first of all treated for pain by the application of heat and various forms of electricity; but, finally, it came to a question of stretching and manipulation, and sometimes most unpromising cases, by persistent work and efforts, were enabled to make a good recovery.

Another class of cases that we had—that we always have—were those in which the nerves had been divided and reunited by suture, with consequent slow re-establishment of motion. The treatment was very much the same as for anterior poliomyelitis. The lines of communication have been destroyed, completely or partially, in both cases. It was for those patients that we found the necessity, not of manipulation only, but of re-education.

It is unfortunate that our neglect of these two procedures has been such that we have given great vogue to the irregular schools to which Goldthwaite referred. The osteopath and the chiropractor have flourished in direct proportion to the neglect of the procedures which they practice. As they raise the standard of their education, which is being done among the osteopaths, their theories become less fantastic. As they increase their requirements, they become more modest in their claims, and as a result there fall out from their ranks those who are unwilling to study or to work, and they form newer cults whose fancy is untrammelled by a knowledge of the facts. The remedy for this condition, the way in which we have got to combat it—and we have to fight it—is to teach the fundamental principles of manipulation, massage, and re-education to the medical student. And I am glad to say that school after school is recognizing this fact, and is introducing courses on the subject. It is now almost universal to prescribe massage for suitable cases, but unfortunately the doctor often dismisses the subject with his prescription. He does not very often realize the necessity of differentiating between kneading and the light stroking movement of effleurage for the relief of pain, the kind of movement that you will use over an irritated or inflamed part, in the neighborhood of a sprain or a fracture, the preliminary movement which is necessary in most cases of that kind. He does not realize the rapid exhaustion that comes to nerves from vibration over a sensitive nerve. He does not recognize the difference between such a movement and the deep kneading which goes under the name of petrissage, in which circulation is pushed along almost mechanically, and in which the deep tissues under the hand are moved and manipulated. He usually prescribes it in such general terms that the only thing necessary for the masseur or for the masseuse is to have physical strength and good will.

If we are to have a complete system of medical treatment this subject must be recognized and studied, and the only way that it can be recognized is by making it part of the education of the medical school.

During the war I had charge of one of these command depots that Goldthwaite spoke of, in

which we had some 5000 men who had been wounded, and we gave sometimes 400 or 500 treatments a day, stretching scars, and re-educating muscles after nerve sutures, and continually we had visiting physicians who, for the first time, began to realize that massage was not just rubbing, and that re-education was a part of medical treatment.

Let me say just one word about re-education. In a case of anterior poliomyelitis and a case of nerve suture, you very frequently find that there is no apparent movement under the ordinary tests. If, for example, you take an injury to the circumflex nerve, you ask the patient to raise his arm, he is unable to do so, and you may conclude that there is no return of action to the deltoid.

It is necessary to try more delicate tests than such a rough and ready one, and also to encourage the slightest beginning of a return of movement, and to nurse it along as a most precious symptom. For testing purposes very many devices have been used. A very good one is to place the limb in water and so to overcome the force of gravity, so that the slightest movement is visible. An ingenious device places the arm of the patient upon a very smooth level surface, so that it can be moved with the slightest possible friction. Another way that was designed during the war was to place the leg on a trolley, with ball-bearing wheels, so that the movement of abduction or adduction were possible with the slightest amount of physical effort. It is hard to realize the amount of encouragement that comes to a patient by the discovery of some slight improvement. It inspires him to know that a joint which last week was capable of movement throughout 30° can now move 35°. We are apt to overlook this psychological aspect. In addition to treating a patient, we are also treating a person, and we must use every way within our reach to increase the amount of interest taken by the patient. For that reason we use various devices with a sort of sporting interest. And I think it might interest you to know the principle upon which some of them are devised. A weight is raised by the muscular action of the muscles to be exercised. It runs up like a clock-weight, and each turn gives a click. The patient can find out if the amount of movement is improving by the number of clicks. The getting of the weight up to a certain point and then having it run down and hit the floor had a stimulating and dramatic effect upon the patient. It is very much the same principle that one sees at the fair, where you are handed a mallet, hit a post sending an indicator up a scale to a bell, and if you ring the bell you get your money back; an irresistible temptation to a good many.

From such simple appliances in which the muscular group is isolated, we go on to exercises that are in the form of games or occupations, and I remember very well a number of men with scars on the forearm with tendon involvement, so that it was impossible to completely close the hand. We gave them light boxing-gloves and a punching-bag, and let them work with them. It was extraordinary how quickly some of these patients regained the amount of movement desired. Their attention was diverted from pain to the hitting of the bag.

All the exercises should be put in the form of

games or occupations wherever possible. And it is only a step, of course, from the playing of games to the practicing of occupations. Various devices have been worked out for that purpose. One of the simplest and one of the most efficient was for cases where the grasp of the hand was weakened, and in which it was impossible for a patient to close his hand on a tool-handle. The device was to take a lump of wax, put it round the hammer-handle, and have the patient close his hand on it and then have it hardened. In this way he could use the tool, although he was not able to completely adapt his hand to the shape of the original handle.

These are some of the ways in which re-education can be practiced. We do not realize in medicine how much of our work must be re-education. The improvement of certain phases of speech defects like stammering and stuttering are purely questions of the re-education of the apparatus for breathing, phonation and articulation, and the treatment for ataxia is a question of re-education of powers that are lost.

If we will only pay the attention we should to the study of the physiological effects of physiotherapy, to the technique of manipulation, to the procedures of massage, and to this question of re-education, we will go far to establish, in its proper relationship, the kinship of physiotherapy to the general practice of medicine, and we will be able to show up in their true light those pseudo cults which have flourished so luxuriantly because of our neglect.

Present-day Problems in Regard to Gall-bladder Infections—Sixty case records have been abstracted by Walter C. Alvarez, Karl F. Meyer, G. Y. Rusk, F. B. Taylor and Jessie Easton, San Francisco (Journal A. M. A., September 22, 1923), and their details charted for the study. In two cases the diagnosis was in doubt. Nineteen, or 33 per cent, of the remaining quite definite cases of cholecystitis were marked by the presence of stones. The first and most important factor in the diagnosis of early cholecystitis, the authors state, is a most careful and complete history. Pain was a common symptom, complained of by 95 per cent of the sufferers. Very helpful and characteristic also are the patients' statements to the effect that, although they have fine appetites and are hungry, they are afraid to eat. It does not make much difference when or what they eat. If they are due for an attack, they will get it even if they are living on tea and toast. Only one out of five had ever had anything like colic. Tenderness to the touch or soreness in the right side on jolting, jarring or reaching was often present, either as a constant symptom or as a transient one after acute exacerbations. It was complained of in 72 per cent of the cases. Very important also is the reverse peristalsis syndrome. Vomiting was a more or less prominent symptom in half of the cases. It may come only with severe attacks or with sick headaches. Regurgitation was noted in twenty-one cases. Acid regurgitation, "heartburn or acid stomach" was often a prominent symptom, and was noted thirty-six times. Nausea is not infrequent, and sometimes is the main source of annoyance. It was complained of thirty-two times. Belching is one of the earliest and most constant symptoms throughout the long course of the disease. Forty suffered with it. Thirty-nine complained of bloating, which was sometimes so severe that they would have to rush to their rooms and disrobe. Some of these persons get sallow with their "bilious spells," or they are

sallow most of the time. Actual jaundice is not a very common symptom even in stone carriers. A history of clay-colored stools can be obtained in only a few cases, and then it is of doubtful value. "Dopiness" is a not infrequent symptom (17 per cent), and often leads to the diagnosis of "auto-intoxication." It is sometimes associated with dizziness (noted in 33 per cent of the series) that is often severe enough to bring the patient to the physician. One of the surprises from these statistics is the great frequency with which constipation was encountered; i. e., in 60 per cent of the cases. Attacks of diarrhea were mentioned by a few of the patients (8 per cent). Hemorrhoids were encountered in at least one-third of the patients. Attacks of fever and chills are encountered mainly in the older patients with stones and phlegmonous cholecystitis. A history of typhoid fever was obtained in only seven of our cases. A history of pelvic disease, tumors, pus tubes, abortions or retroversion was obtained from 60 per cent of the women, and many had been operated on. One out of five had, or had had fibroids of the uterus. Arthritis was complained of more or less in seventeen cases (28 per cent), and its presence may therefore be suggestive diagnostically. Four women out of the series had had the right kidney stitched up, with more or less temporary relief. A history of nervousness, nervous breakdowns, and marked depression was obtained in half of the cases. In the examination, the most important finding is that of a tender liver edge. This was observed in forty cases. The gall-bladder could be palpated only in the severest cases in which a mucocele had developed following closure of the cystic duct. Fourteen had more or less heart trouble. Gastric stasis is unusual in cholecystitis, and, when present, it suggests some complication such as ulcer or appendicitis. The striking thing in these reports is the fact that a gall-bladder can remain almost unchanged after forty years of infection and stone formation. The mortality was low (1.7 per cent). Only one woman died as a result of the operation, and she had a complete volvulus of the bowel, made possible by a peculiar mesentery which had a very limited attachment to the spine. Seventeen are perfectly well or remarkably improved; eighteen are much better; eleven report some improvement, and three are apparently no better. At operation, the gall-bladders were often found to be thin-walled and normal in appearance; hence, in order to relieve the patient, the organ had to be removed on the strength of a good history, suggestive physical and Roentgen-ray findings, and the presence of large glands on the cystic duct, adhesions in this region and patches of perihepatitis. Remarkably few histologic changes were found in some gall-bladders which contained stones and which had given symptoms for forty years. Living bacteria were obtained from 82 per cent of the calculous, and from 57 per cent of the acalculous, gall-bladders. The infection was found most commonly in the wall, and the histologic changes were generally in the muscle and subserosa. The bile was often sterile (71 per cent), and normal in appearance.

Pericolic Membranes Simulating Carcinoma of the Colon—Arthur Goetsch, Brooklyn (Journal A. M. A., September 29, 1923), has operated in two cases in which the clinical diagnosis of carcinoma of the ascending colon had been made. At operation, the true condition was found to be partial obstruction due to unusually peculiar vascular adhesions. Both clinically and by Roentgen-ray examination, they presented clinical syndromes similar to those of carcinoma of the colon. It is believed that the unusual vascular bands found in these cases were due to developmental defects that were capable, in themselves, of causing partial obstruction, with the clinical picture of carcinoma of the colon. Both patients have been under periodic observation. They have regained their normal weight and are generally free from their pre-operative complaints.

EDITORIALS

PRINCIPLES VERSUS METHODS IN HEALTH WORK

Those who study seriously the lines of development in public health cannot ignore the fact that much of the publicity focuses the attention of the public upon *methods* primarily and utilizes *principles* as talking points in support of the methods—good and bad. This is particularly true in the extensive field of better health for children. Of course, every person realizes the magnitude of this problem, and every right-minded person is wholeheartedly in favor of doing everything possible that is practicable toward improving the health not only of children, but of all other people. In so-called scientific literature, and particularly in more general literature, we are deluged with a great variety of different *methods* of improving child welfare, each one of which is considered to be fundamentally essential by its proponents. They usually do not say very much about the method; they simply announce it as an axiom and turn on the sob-story as an explanation of what will happen to the children if their particular pet method is not followed.

There was a time when the medical profession in its duties in preventing and treating disease was considered the most important factor in designating methods for the improvement of health. Today the tendency is to get further and further away from the physician, apparently because he is considered to be inadequately educated, too conservative and too selfish to permit his opinion to be of particular value in these movements. It is impossible to examine the literature of the subject at all critically without seeing very strong moving tendencies to break up public health betterment into several heads, in none of which is included the medical profession except in an incidental manner.

An examination of a recent volume on social welfare, published by the American Academy of Political Sciences, shows the tendency of one strong non-medical public health group and its earnest desire for leadership in this movement. In this book, containing some fifty or more articles by various types of "experts" in social welfare work, there are only a very few articles by doctors of medicine. The importance and responsibility of physicians in medical welfare work is mentioned only casually in this entire volume and, in many of the instances, in language that reflects discreditably upon the medical profession. This group undoubtedly would like to have a national department of social welfare, of which the medical profession would be a subordinate bureau. The educational authorities of the country are moving substantially in the same direction. Educational departments everywhere, including California, are active in building up subordinate medical departments upon somewhat the same basis that insurance companies and other great corporations employ in directing their medical departments. These medical departments in schools are, of course, under the control of non-medical

educators. An indication of the tendency in our own State is shown in an article by Walter M. Dickie, executive officer of the State Department of Health, published in the Weekly Bulletin of the California State Board of Health, January 27.

"The schools have provided a remarkable field for this public-health type of work, and boards of education throughout the State are not only starting new machinery for promoting the health of the school children, but they are also expanding and elaborating upon machinery that is already provided." . . .

"Nutritional problems, routine physical examinations, the teaching of personal hygiene, and similar factors, are, strictly speaking, within the province of the local educational authorities. The control of the communicable diseases, however, is absolutely and entirely within the province of health departments."

Another group that was particularly ambitious to control the public health field of this country, and incidentally to control physicians as subordinates of lay people in the public health field, is represented by organizations like the Red Cross and others of similar character. As an agency of war, for which it was designed, the Red Cross did serve, and undoubtedly would again serve, a valuable purpose, but if there is any place for it in our country in the every-day field of public health work during peace times, that fact constitutes a serious reflection upon the agencies charged by law with these duties.

The official health agencies as represented by national, state and local boards of health also are concerned in the development of a national public health department headed by physicians and operated by physicians. If such a department is to be created it should recognize public health as part of medicine, and the leaders and officers of the service should have a medical education. Many of the leaders of public health organizations appreciate this fact and are using every legitimate means to promote better public health by having public health bodies conducted by educated physicians. A considerable element among public health officials, however, apparently have felt that they were not strong enough to maintain control of their own field and they have formed various combinations with other non-medical, so-called health agencies, under one name or another, in the hope that by making such combinations they would win their point, even though they themselves thereby would take subordinate positions in the health work. These various combinations are changing ones—sometimes they are on, sometimes they are off. Recently a serious attempt was made to bring two of the largest of these elements together, believing that thereby they could establish at Washington a socio-political department to control the entire field of public health and medical welfare in this country. Fortunately for the people of the United States, the plan fell through—at least temporarily.

Broadly speaking, there are five major forces whose function includes public health that converge at Washington in a national way and in every state, county and city in a smaller way. Some of

these forces are so inclusive in their progress that the outriders and those toward the edges of the different forces get so mixed up that they have succeeded in spoiling a unified formation and impeding progress of any of them—at least temporarily. These forces are (1) organized education with all of its various contacts; (2) the official health agencies and medical departments of government; (3) the medical department of the Veterans' Bureau; (4) the welfare and social service group; and (5) the medical profession, including those engaged in preventing and in treating disease. A great many people, including some legislators, administrators and politicians, profess to believe that these great forces can be harmonized and brought together and made to function as one great service under a Cabinet officer. Many attempts have been made, and some are now being made, to bring this about, and it is not at all unlikely that a law to this effect may be passed during the next few years.

PROGRAM FOR 1924 STATE MEETING

All members who desire to present papers before the 1924 State meeting to be held at the Los Angeles Biltmore, Los Angeles, May 13, should communicate with the secretary of their respective section at the earliest possible date.

In the Directory of Medical Organizations of California, published on page 58 of the Journal, can be found the names of the present officers of all sections.

THREE LETTERS OF VITAL INTEREST TO MEMBERS

Letter No. 1

To All Members of the California Medical Association:

TERMINATION OF MEDICAL DEFENSE

MEDICAL DEFENSE TERMINATES JUNE 30, 1924

June 25, 1923.

Dear Doctor: At the meeting of the House of Delegates held June 23, 1923, the following resolution was adopted:

"Whereas, The House of Delegates at its regular annual meeting held at Yosemite, May 17, 1922, unanimously adopted a resolution directing the Council to make medical defense optional, the cost thereof to be met by separate assessment on the members desiring it; now, therefore be it

"Resolved, That medical defense be terminated as of June 30, 1924, and that the Council is hereby authorized to effect, if possible, a blanket defense policy arrangement with one or more insurance companies to be made optional for such members as desire such protection, and thereby retain for such members the services of the Society's legal staff; or, if such blanket policy plan is not found practicable, to arrange and submit to the membership a plan optional to each member to retain the Society's legal staff."

This means that any malpractice suit or threatened suit against you arising out of your professional services to any patient after June 30, 1924, will not be defended by the Society.

Please keep this letter on file for future reference. Yours very truly,

EMMA W. POPE, Secretary.

EWP:D

Letter No. 2

To All Members of the Indemnity Defense Fund:

INDEMNITY DEFENSE FUND DISCONTINUED

June 25, 1923.

Dear Doctor: At the meeting of the House of Delegates held June 23, 1923, the following resolution was adopted:

"Whereas, The Council, under instructions from the House of Delegates to present a plan to make medical defense optional, has conducted a canvass of the members of the Indemnity Defense Fund, being those members most interested in the subject of physicians' defense, in an effort to incorporate such Indemnity Defense Fund, but finds that such incorporation plan is not acceptable to a sufficient number of members to warrant further effort, and that it is not possible because of lack of support; now, therefore be it

"Resolved, That the Indemnity Defense Fund be discontinued as a Society undertaking at such time and upon such notice as the Council shall deem necessary for the best protection of its members, and the Council is hereby directed to accept no further memberships in the Indemnity Defense Fund."

This means, as far as you are individually concerned, that your coverage in the fund will continue until replaced by a "blanket policy" in which, should you desire, you will be included. When the fund has been finally discontinued, the balance will be returned to each subscriber as soon as practicable.

The accompanying letter (Letter No. 1) states that for you also, as a member of the Association, medical defense will terminate as of June 30, 1924.

The plan for incorporation of the fund, actively promoted by all those interested, including the Council, the officers of the Society, and its attorneys, has been found unacceptable to a sufficient number of members. No further action will be taken in this direction.

The Power of Attorney heretofore signed by you is returned herewith. Kindly acknowledge receipt of same. Any subscription you may have agreed to make to the proposed plan of incorporation is hereby canceled as of this date.

Under authority from the House of Delegates, the Council will now negotiate with all available carriers for a blanket policy for those who wish it. As soon as offers from insurance companies have been received, you will be notified. The premium rate under a blanket policy will be less than the regular premium rate, and those members going into this policy arrangement will be grouped by themselves. Yours very truly,

EMMA W. POPE, Secretary.

Enc.
EWP:D

Letter No. 3

Important

Read Carefully

FUND COVERAGE AND PROTECTION STOPS

NOVEMBER 30, 1923

September 24, 1923.

To All Members of the Indemnity Defense Fund:

Dear Doctor: The Council, at an adjourned meeting held in San Francisco, September 22, 1923, considered the propositions for a group defense policy submitted by insurance companies. It was the

unanimous opinion of the Council that none of the proposals were in such terms or offered conditions that would be acceptable to the membership; therefore, none of the offers were accepted.

The following preamble and resolutions were unanimously adopted:

"Whereas, The House of Delegates of the California Medical Association (formerly called the Medical Society of the State of California), at its last regular meeting held at San Francisco, California, June 23, 1923, by resolution unanimously adopted, resolved that the Indemnity Defense Fund be discontinued as a Society undertaking at such time and upon such notice as the Council should deem necessary for the best protection of its members; now, therefore, pursuant thereto and to the authority vested in the Council by the Administration Regulations and Coverage Rules of said Indemnity Defense Fund, it is hereby unanimously

"Resolved, That the benefit, protection, coverage and indemnity of the Indemnity Defense Fund shall not nor shall any part thereof extend to or cover any malpractice claim or case or suit or judgment, as defined by said Regulations and Rules, against any member of said fund, arising out of professional services or acts done by or on behalf of such member on or after December 1, 1923; and no member of said fund shall have or be entitled to or receive any benefit or protection or coverage or indemnity from said fund or any part thereof as to any such claim or case or suit or judgment against him so arising out of professional services rendered or acts done by him or on his behalf on or after December 1, 1923; and said Administration Regulations and Coverage Rules are hereby amended accordingly; and be it further hereby

"Resolved, That a copy of this resolution be forthwith sent to the trustees of the Indemnity Defense Fund and to each member of said fund at his address as shown by the Association's books and records by registered mail, and that the secretary of the Association in such registered letter direct the attention of each member to the necessity of securing a physician's indemnity policy with some insurance carrier, issued to him and effective not later than November 30, 1923; and that this resolution be published in the November issue of the Journal, and, if possible, in the October issue thereof."

This means, as far as you are concerned, that you will have no protection from the Indemnity Defense Fund in any malpractice threat, claim, case or suit which is based on anything occurring in your practice on or after December 1, 1923.

It will, therefore, be necessary for you to secure a policy with a commercial company, issued to you and in effect November 30, 1923.

Upon request, this office will furnish you with any information that you may desire or that may be helpful in this connection. Cordially yours,

EWP:D

EMMA W. POPE, Secretary.

PHYSICIANS AND LIFE INSURANCE

With assets of \$7,000,000,000, life insurance is the greatest business in the world, says O. F. Maxon, M. D. (Illinois Medical Journal). Not only is it the most gigantic from a financial standpoint, but in the number of people served and therefore interested. Physicians are vitally interested in, and are the most prominent of contributors to, the success of insurance. Some of this interest, according to Maxon, is shown by the fact that:

"In 1921 American Legal Reserve Companies

paid their medical examiners over \$8,000,000 in medical fees.

"The Metropolitan Life Insurance Company's nurses made 2,116,875 visits free of charge to its industrial policy-holders and 18,984 visits to persons insured under group policies."

Some two and one-half million medical examinations mean not only a vast amount of service and a large income to the medical profession, but it brings to them opportunities to serve people, and for conditions not covered by insurance policies. The interests of medicine and public health are closely associated with life insurance and the insurance companies are an all-powerful force in the future of medicine and the passing and enforcing of medical laws and policies.

EPINEPHRINE APNEA

The sympathomimetic action of epinephrine is undoubtedly the most prominent and important one possessed by this drug, but it is not the only one. Another striking action is the apnea, or stoppage of respiration, produced during the rise of blood pressure when the drug is injected intravenously. The cause of this respiratory inhibition has been variously attributed to the rise of blood pressure, vasoconstriction, anemia and to the direct action of epinephrine. The importance of seeking an explanation for the epinephrine apnea lies in obtaining a more complete knowledge of the drug's action, in determining definitely whether all of its actions are to be regarded as uniformly sympathetic in origin or not, and in reconciling the apnea with the theory of the emergency role of epinephrine and adrenals, which has been so much exploited during the past few years in this country.

The final analysis of a drug's action is frequently made on isolated structures or organs, but in the case of epinephrine apnea, perfusion experiments on the medulla have given variable and inconclusive results. As far as the intact organism is concerned, the evidences brought forward by Bouckaert* of the physiological laboratory of the University of Louvain seem conclusive and indicate that the apnea is due to a direct action of epinephrine. The experiments of Bouckaert also illustrate nicely the use of pharmacological methods in the analysis of physiological function. Making use of the well-known reversal of pressor (to depressor) action of epinephrine by ergotoxine, Bouckaert found that when cats and rabbits were injected previously with ergotoxine and then with epinephrine, the respiratory stoppage, or apnea, occurred in the usual way, without a rise of blood pressure. Under these conditions vasoconstriction was excluded, since the blood pressure tended to fall and ergotoxine paralyzed the vasoconstrictor nerves. The fall of blood pressure was variable and small and hence practically excluded anemia. Bouckaert concludes, therefore, that epinephrine possesses a direct action on certain structures, notably the respiratory center, besides its action on the sympathetic nerve endings. Just how the direct

*Bouckaert, J.—Arch. Néerland. de Physiol. de l'Homme, et des Animaux, 1922, 7:285, "Contribution a L'Etude de L'Influence de L'Adrenaline sur La Respiration."

inhibitory action of epinephrine on the respiration can be reconciled with the emergency theory is difficult to see. In fact, the apnea action might be used against this particular theory.

THE SOCIALIZATION OF MEDICINE

Whether the practice of medicine is to continue to be a private arrangement between the free physician and the free patient, the patient's freedom including his right of selection of his physician, or whether the State shall take the profession over and regulate medicine as it does education, continues to be an important question to physicians and patients. It has been for a long time a burning question among physicians in all countries. It is now receiving more and more attention from the public. Opinion divides almost exactly as it divides between the socialist and the individualist upon any other question.

Some socialists quite frankly admit that medicine and public health is their choice experimental ground. It is a good one from their standpoint for three particularly favorable reasons: Physicians are so loosely and unselfishly organized that it is easy to overcome their indefinite mass influence; the end results of sickness and death are easy to blame upon almost anything except the facts, and it is easy to get even medical assistance in propaganda by making a few of the members of the profession beneficiaries of the scheme.

Reports from countries that have broken down to an extent physicians' opposition and have been operating forms of State medicine for years are enough to make one, sincerely fond of his fellow-man, wonder at what a people will stand for in the name of government. "State Medicine" is touched upon in some way in most issues of most medical journals, but the problem rarely is so truthfully and clearly stated as was done by Frederick C. Warnshuis, speaker of the House of Delegates of the A. M. A., in his report at the seventeenth annual meeting. Among other things, the speaker said (Journal A. M. A., July 7, 1923):

"State medicine" was defined by this House during our last session. That definition is clear and conclusive. I assume that the formulation and adoption of that defining statement was for the purpose of establishing a policy and a principle for the guidance of our State and county units. I assume, further, that activity, on the part of members individually, collectively or as public officials, would be subject to the jurisdiction of component units of which they are members when the provision of that resolution was violated. The events of the past year, in many States and localities, are indicative that but little, if any, consideration has been given to the policy enunciated. It is apparent that certain members assume that they and their associates are neither amenable nor subservient to the acts of this body; that they are self-sufficient and supreme unto themselves.

"If we are to endure, if we are to be more than word formulators, if we are to exercise full organizational prestige and influence, then it becomes imperative that every member of this association be made to realize that our policies are not idle

compositions or visionary speculations. To remain affiliated with this national body, it must be impressed on those who comprise its membership that such membership entails the willingness to keep inviolate the laws and rules that govern our federacy. I therefore deem it advisable that you direct that a compilation of the policies of this association be promptly undertaken by the secretary; that this compilation shall plainly set forth the position that State and county units shall assume in meeting the problems of public health movements and in particular to the activity of group clinics, community and hospital clinics, national and State health clinics, health boards and health officers; that this compilation shall conclude with the statement that any action controversial to the announced policies of this association, either by individuals, groups or component units, shall be submitted to review by State councils and our Judicial Council, and subjected to such action as these respective bodies may deem advisable. Further, that our secretary be instructed to cause the distribution of such compilation to be accompanied by a letter directed to State and county officials conveying the recommendation of this House that they take requisite action that will obtain a general observance of the policies enunciated by this body.

"I distinctly wish it understood that I do not criticize efforts directed to strictly public health measures. These have our unqualified support. But when that purpose is used as an excuse to justify the institution of socialized medicine for all classes of society, and in so doing condemnation and ridicule are directed to the profession as a whole, as well as to individuals, we emphatically declare that the time has come to call a halt and that they who thus conduct themselves shall be called to account; that their right to continue as members of this organization shall be inquired into, and if the facts reveal that they are unworthy, that their membership shall be promptly terminated."

ANNUAL HOSPITAL CONFERENCE

The third annual conference of the Hospitals of California, held at San Francisco, October 18, 19 and 20 was, as one of the metropolitan dailies stated, "a constructive demonstration of the practical value of the hospital betterment work of the League for the Conservation of Public Health." The importance of the meeting is indicated in the vital subjects discussed and the prominent speakers who discussed them.

Among the outstanding features of the splendid program were the following addresses: "The Duties and Responsibilities of the A. M. A. in Hospital Betterment," by Dr. Ray Laman Wilbur, president of the American Medical Association; "The California Medical Association and Hospital Betterment," by Dr. T. C. Edwards, president California Medical Association; "Hospital Betterment in California," by Dr. John H. Graves, past president California Medical Association and of the League.

The subject, "How May Hospital Care Be Furnished Most Economically, Adequately, and Efficiently to Those Who Cannot Afford to Pay the

Full Cost of Such Service," was presented by Dr. George B. Somers, director Lane and Stanford University Hospitals, as "one of the biggest problems concerned with the conservation of public health." This subject stimulated the liveliest debate and received the widest publicity. The discussion of this perplexing medical and economic problem developed so many different angles and showed such a wide diversity of opinions and plans that the conference, by unanimous resolution, requested the League for the Conservation of Public Health to investigate the question thoroughly, accumulate all available data, and suggested solutions and present them in comprehensive form to the 1924 Hospital Conference.

"Group Nursing"; "The Best Methods of Articulating the Hospital With Its Various Legitimate Contacts, Pathology, Clinical Laboratories, Radiology, Nursing, Dental, and other Departments"; "Medical Social Service in Its Relation to the Patient and Hospital"; "Significant Progress in Nursing Education"; Hospital Administration, Including Methods of Accounting, Reports, Methods of Admission, Classification and Discharge of Patients, were other timely topics handled by able speakers.

A symposium on "The Narcotic Problem in California" under the combined auspices of the Hospital Betterment Bureau of the League for the Conservation of Public Health, the City Federation of Women's Clubs, and the California Medical Association, brought out many constructive suggestions on what California should do through legislation, administration and police activities, medical prevention and treatment and education to improve the narcotic situation in our State. Among the speakers that discussed the narcotic problem from their various viewpoints were Hon. Samuel M. Shortridge, Senator from California; Very Rev. Charles A. Ramm, Regent of University of California; Louise B. Deal, M.D., chairman Anti-Narcotic Committee; Duncan Matheson, Captain of Detectives, San Francisco Police Department; Mrs. D. E. F. Easton, president City Federation of Women's Clubs, and Dr. Dudley Smith, president League for the Conservation of Public Health.

The conference by unanimous resolution sent "a message of loving friendship, appreciation and cheer to Dr. W. E. Musgrave, whose devoted, unstinted and efficient efforts, as chairman of the Hospital Betterment Bureau of the League, have been a source of inspiration to all worthy hospitals of California."

The meeting was thoroughly representative and constructive. The hospitals of California, which are constantly improving their service and keeping abreast of the hospital betterment movement, participated in the conference.

Typhus Fever in Southern California—L. M. Powers, Los Angeles (Journal A. M. A., October 6, 1923), calls attention to the danger of typhus fever becoming endemic in the southwestern portion of the United States, and urges the local authorities to action in preventing such a condition. There have been reported to the State Board of Health twenty-eight cases since the spring of 1916. Of these, twenty occurred in Southern California.

STATE SOCIETY

ABSTRACTS FROM THE MINUTES OF THE 141ST MEETING OF THE COUNCIL OF THE CALIFORNIA MEDICAL ASSOCIATION.

Adjourned meeting held in San Francisco, Saturday, September 22, 1923, at 10 o'clock a. m.

The complete minutes of this and all other Council meetings are on file in the office of the State Society and are open to any member of the society.

Present—Doctors Edwards, Parkinson, De Lappe, McLeod, Stover, Hamlin, Ewer, Kiger, Strietmann, Saxton Pope, Emma W. Pope, General Counsel Peart and Assistant General Counsel Morrow.

Absent—Doctors MacGowan, Beattie, Coffey, Curtiss, Bine, Carrington, McArthur and Kress.

Illness of Editor—Saxton Pope reported on the illness and present condition of the editor, William E. Musgrave, stating that he believed he had every chance for a recovery.

Action by the Council—On motion of Kiger, seconded by McLeod, the following resolution was adopted:

Whereas, the Council having heard from Saxton T. Pope, M. D., as to the condition of our editor at this date.

Resolved, That it desires to express its sincere sympathy with Doctor Musgrave and his family in his present illness; and that every member trusts his favorable condition indicates further improvement and an ultimate resumption of his work.

Blanket Physicians' Defense Policy—The general counsel then reported on the bids submitted by various insurance companies. These bids were then read and discussed by the general counsel, assistant general counsel and members of the Council.

Action by the Council—Upon motion of Saxton Pope, seconded by De Lappe, it was unanimously

Resolved, That the group defense policy propositions submitted by the Aetna Life Insurance Company, Georgia Casualty Company, Hartford Accident & Indemnity Company and the U. S. Fidelity & Guaranty Company, at the request of this Society be not accepted, it being the sense of the Council that none of the proposals made is upon such terms or conditions as would be acceptable to the membership or satisfactory and practicable of operation; and be it further

Resolved, That the secretary advise each of said companies accordingly.

Termination of Indemnity Defense Fund—The question of the termination of the Indemnity Defense Fund was then discussed, and the general attorney and the assistant general attorney presented the resolution next herein set forth. After full discussion by the attorneys and members of the Council, upon motion of De Lappe, seconded by Hamlin, the resolution was unanimously adopted:

Whereas, The House of Delegates of the California Medical Association (formerly called the Medical Society of the State of California) at its last regular meeting held at San Francisco, California, June 23, 1923, by resolution unanimously adopted, resolved that the Indemnity Defense Fund be discontinued as a society undertaking at such time and upon such notice as the Council should deem necessary for the best protection of its members; now, therefore, pursuant thereto and to the authority vested in the Council by the administration regulations and coverage rules of said Indemnity Defense Fund, it is hereby unanimously

Resolved, That the benefit, protection, coverage and indemnity of the Indemnity Defense Fund shall not nor shall any part thereof extend to or cover any malpractice claim or case or suit or

judgment, as defined by said regulations and rules, against any member of said fund, arising out of professional services or acts done by or on behalf of such member on or after December 1, 1923; and no member of said fund shall have or be entitled to or receive any benefit or protection or coverage or indemnity from said fund or any part thereof as to any such claim or case or suit or judgment against him so arising out of professional services rendered or acts done by him or on his behalf on or after December 1, 1923; and said Administration Regulations and Coverage Rules are hereby amended accordingly; and be it further hereby

Resolved, That a copy of this resolution be forthwith sent to the trustees of the Indemnity Defense Fund and to each member of said fund at his address as shown by the Association's books and records by registered mail; and that the secretary of the Association in such registered letter direct the attention of each member to the necessity of securing a physician's indemnity policy with some insurance carrier issued to him and effective not later than November 30, 1923; and that this resolution be published in the November issue of the Journal, and if possible, the October issue thereof.

Notice of Termination of Fund—The question of notifying all members of the Fund of the termination of such Fund was considered. It was the sense of the Council that the chairman and the general counsel prepare such a notice to be sent by the secretary to all members of the Fund as provided by the resolution.

Optional Medical Defense—The question of formulating a plan whereby members of the Association can secure Society medical defense if they so desire was considered.

Action by the Council—Upon motion of Kiger, seconded by De Lappe, it was unanimously

Resolved, That the general counsel and assistant general counsel be instructed to prepare and submit to the executive committee at a subsequent meeting an outline of the proposed optional medical defense.

Date of 1924 Meeting—Upon motion of Hamlin, seconded by Ewer, it was unanimously

Resolved, That the opening date of the next annual meeting of the California Medical Association be fixed for Tuesday, May 13, 1924.

Hotel and Convention Headquarters for 1924 Meeting—The secretary then presented invitations from the Los Angeles Biltmore, Hotel Alexandria and The Ambassador to hold the 1924 meeting in their hotels. After discussion, upon motion of Kiger, seconded by De Lappe, it was unanimously

Resolved, That the invitation of the Los Angeles Biltmore as submitted under date of September 19, 1923, to hold the 1924 meeting in that hotel be accepted; and that the Los Angeles Biltmore be made hotel and convention headquarters for the 1924 meeting of the California Medical Association.

Committee on Arrangements—The president advised the Council that he had appointed Doctor Kiger, chairman, and Doctors McArthur and Shoemaker, all of Los Angeles, members of the Committee on Arrangements for the 1924 meeting of the Association.

Discontinuance of Certain New Sections—The secretary then brought up the question of discontinuing certain new sections as raised by the Applied Biology Section (Alfred C. Reed, chairman) and the Physiology, Chemistry and Pharmacology Section (Walter C. Alvarez, chairman). Letters from these two sections were read for the information of the Council.

Action by the Council—Upon motion of Stover, seconded by De Lappe, it was

Resolved, That the Applied Biology Section and the Physiology, Chemistry and Pharmacology Sec-

tion of the California Medical Association be discontinued.

Industrial Medicine—The chairman of the Council reported that he had been unable to secure a report from the Industrial Accident Section of the Association on the appointment of a committee by his section or the proposed activities of such committee as requested by that section at the annual meeting. It was the sense of the Council that the matter be deferred until the next meeting of the Council.

Question of Dividing the United States into Territorial Districts—The secretary reported that she had been unable to secure a report from Doctor Paterson, chairman of this committee. It was the sense of the Council that the secretary be instructed to again write Doctor Paterson, and that the matter be deferred to the next meeting of the Council.

Bunnell Memorial—The president advised the Council that he had appointed Egerton Crispin of Los Angeles, secretary of the Southern California Medical Association, the third member of the Committee on the Bunnell Memorial. The other members of this committee are Emmet Rixford, chairman, and Saxton T. Pope, both of San Francisco.

Graduate Instruction for Physicians in General Practice—Edwin I. Bartlett, chairman of the Committee on Graduate Instruction for Physicians in General Practice, presented the views of his committee on the subject of graduate instruction for physicians in general practice. The matter was fully discussed, and Doctor McLeod stated that he felt this was the best way to secure new members for the Association, and that, if the hospitals in San Francisco and Los Angeles could arrange schedules giving the time and classes of work to be done, much could be accomplished in keeping the country doctors in touch with modern medicine and surgery.

It was the sense of the Council that the matter be continued until the next meeting of the Council, at which time Doctor Bartlett should make a further report.

The Value of Forcing Fluid in the Treatment of Mercuric Chlorid Poisoning—Having determined that 15 mg. of mercuric chlorid per kilogram of weight was the fatal dose for dogs, Charles C. Haskell, J. R. Carder and R. S. Coffindaffer, Richmond, Va. (Journal A. M. A., August 11, 1923), attempted to ascertain whether dogs could be saved after this dose. The mercury was given to the treated dogs in the same manner as to the controls. After allowing from thirty minutes to a little more than two hours to elapse, they gave the dogs an injection, into the jugular vein, of 25 cc. of an 0.8 per cent saline solution per kilogram of body weight; this was followed by injection of a similar amount either subcutaneously or intraperitoneally. The animals were kept in metabolism cages, and intraperitoneal injection of 50 cc. of salt solution per kilogram of body weight was repeated daily for varying lengths of time, until death or apparent recovery. If the dog was in good condition after one month, it was considered as having "survived." It was evident that a definitely favorable influence is exerted by the use of large amounts of physiologic sodium chlorid solution in dogs poisoned by mercuric chlorid. Thus, of the twenty-five dogs receiving the fatal dose of 20 mg. of mercuric chlorid per kilogram of body weight, and subsequently treated by intravenous subcutaneous and intraperitoneal injections of large amounts of saline solution, twenty survived. So far as experiments justify conclusions, it seems permissible to the authors to state that the intravenous injection of salt solutions comparatively soon after oral ingestion of mercuric chlorid possesses a definitely beneficial action and effects the recovery of animals that have received what is probably the surely fatal dose for untreated dogs.

GRADUATE INSTRUCTION FOR PHYSICIANS IN GENERAL PRACTICE

It was the sense of the council at the adjourned meeting held in San Francisco September 22, 1923, that letters be sent to the University of California Hospital, Stanford University Hospital, White Memorial Hospital, and the accredited hospitals of California asking for their co-operation in furnishing graduate instruction for physicians in general practice.

William Ophuls, dean of the Stanford University Hospital, 2398 Sacramento street, San Francisco, responds:

"I am able to tell you that we shall be very glad to co-operate with the State Medical Society in an effort to facilitate the graduate instruction for physicians in general practice. Ever since the organization of the Stanford University Medical School, we have offered properly qualified physicians the opportunity to do work in our clinics and laboratories as special workers, and since last summer we have been encouraging physicians to take such special work during the summer months; that is, in July, August, and September. The opportunities which we offer are largely for practical work without much theoretical instruction. Our library offers unusual opportunities, however, for study along theoretical lines.

We are also maintaining the so-called 'Colloquia,' which, in fact, are clinical demonstrations in the San Francisco Hospital. They were started by the San Francisco Polyclinic, and have been taken over by us. The Surgical Colloquium occurs on Thursday mornings at 9 o'clock, and the Medical Colloquium on Friday mornings at 10 o'clock. The programs for these Colloquia are posted in the Lane Medical Library and in the library of the County Medical Society. Any physician may have these programs sent regularly, by application to the dean's office at our Medical School.

At the Medical School we have mid-day clinics, as follows: Mondays at 11:30, Clinico-Pathological Demonstrations; Wednesdays at 11:30, Clinics in General Medicine; Saturdays at 11:30, Clinics in Obstetrics and Gynecology.

The following is a schedule of the clinic operating days and hours at the Stanford Hospital. Members of the State Medical Society are cordially invited to attend these operative clinics:

Mornings—Monday, Genito-Urinary, 8:30-12 (Class, 10); Tuesday, Surgical, 8-12; Wednesday, Gynecology, 8:30; Thursday, Surgical, 8:30-12 (Class, 11-12); Friday Genito-Urinary, 8:30-12 (Orthopedic Class, 10-12); Saturday, Surgical, 8:30-12 (Class, 11).

Afternoons—Monday, Orthopedic, 2; Nose and Throat, 1:30. Tuesday, Gynecology, 1:30; Surgical, 1:30. Wednesday, Eye, 1:30; Nose and Throat, 1:30. Thursday, Surgical, 1:30. Friday, Gynecology, 1:30. Saturday, Surgical, 1:30.

The following are the heads of the various clinic departments. The operations are, of course, frequently performed by their assistants: Surgical, Stanley Stillman; Obstetrics and Gynecology, Alfred B. Spalding; Ear, Nose, and Throat, Edward C. Sewall; Eye, Albert B. McKee; Genito-Urinary, Rufus L. Rigdon, Orthopedic, Leonard W. Ely."

L. S. Schmitt, acting dean of the University of California Hospital, Parnassus and Third avenues, San Francisco, writes as follows:

"I am advising you of the activities at the University of California Hospital open to visiting doctors.

Medicine—Ward rounds (daily), 10 a. m. to 12 m.; general staff rounds, Wednesdays, 10 a. m. to 12 m.; amphitheater clinics, Saturdays, 10 a. m. to 11 a. m.; clinical pathological conference, Saturdays, 11 a. m. to 12 m.; out-patient clinics, daily; health center (periodic examination of apparently healthy persons), Tuesdays and Thursdays, 10 a. m. to 4 p. m.

Surgery—Operative surgery. Physicians interested may telephone to supervisor of operating-room, Sunset 3600, for information concerning schedule. Ward rounds, Thursdays, 10:30 a. m. to 12 m.; amphitheater clinic, Saturdays, 9 a. m. to 10 a. m.; clinical pathological conference, Saturdays, 11 a. m. to 12 m.; out-patient clinics, daily.

Pediatrics—Ward rounds (daily), 9 a. m. to 10 a. m.; general staff rounds, Fridays, 9:30 a. m. to 11:30 a. m.; out-patient clinics (daily), mornings: asthma clinic, Mondays, Wednesdays, and Fridays, afternoons; well-baby clinic—periodic examination of apparently healthy babies. Clinic, Mondays and Wednesdays, 2 p. m. to 4 p. m.

Obstetrics and Gynecology—Operative gynecology. Physicians interested may telephone to supervisor of operating-room, Sunset 3600, for information concerning schedule. Ward rounds, Mondays and Fridays, 9 a. m. to 10 a. m."

Percy T. Magan, dean, assures us that the White Memorial Hospital (North Boyle and Michigan avenues, Los Angeles) is "more than glad to receive visiting physicians, and to co-operate in every way in this good work." The following is a schedule of their surgical hours:

Sunday—8-10, tonsillectomies; 10-12, tonsillectomies.

Monday—8-10, surgery clinic; 10-12, surgery clinic; 11:30-12:30, surgical clinical lecture.

Tuesday—8-10, tonsillectomies; 10-12, tonsillectomies.

From the following accredited hospitals, letters have been received stating their willingness to have visiting physicians at operations, and to furnish telephonic schedules of the day's work upon request. To this list will probably be added other hospitals still having this matter under advisement.

Los Angeles County—Children's Hospital, Sunset Boulevard and Vermont Avenue, Los Angeles; Los Angeles General Hospital, 1100 Mission Road, Los Angeles.

San Francisco County—French Hospital, Geary street and Fifth avenue, San Francisco; Mary's Help Hospital, 145 Guerrero street, San Francisco; Southern Pacific Hospital, Fell and Baker streets, San Francisco (limited accommodations); St. Luke's Hospital, Twenty-seventh and Valencia streets, San Francisco.

Alameda County—Livermore Sanitarium, Livermore; Samuel Merritt Hospital, Hawthorne and Webster streets, Oakland.

San Diego County—St. Joseph's Hospital, Sixth street and University avenue, San Diego.

Mental Retardation and Ductless Gland Disease—

Cases of mental retardation in which outspoken ductless gland disorders could also be detected are recorded by Hans Lissner and Charles E. Nixon, San Francisco (Journal A. M. A., October 6, 1923). The mental retardation was definite in all, and the endocrine disturbances were likewise obvious. It is indicated by the authors that a glandular origin for the mental retardation must remain for the present an unproved theory. It is noted, however, that thyroid feeding definitely advances the intelligence of mentally defective subjects of congenital myxedema. When pituitary extracts of similar potency are available, comparable results may be achieved in mental defectives, the subjects of dyspituitarism. Since the proof of such a contention hinges on mental improvement by appropriate organotherapy, it is stated that considerable experience with pituitary preparations now available has resulted in suggestive and encouraging results in a few instances, but not sufficiently striking or consistent to prove the foregoing hypothesis at present.

COUNTY NEWS

One of our county secretaries has sent out the following call for a meeting. It is published at the head of this column because it might well be applied to every society and every individual member:

"Organized Medicine represents the backbone of the ethical medical profession.

Our County medical societies constitute the backbone of organized medicine.

Each Member of the county societies should help to constitute the backbone of his society.

The member whose interest is lacking in the welfare of his society is not protecting his own interests, nor is he showing the proper attitude toward the profession to which he belongs.

A Chain is Only as Strong as Its Weakest Link

Each member of our society represents a link in this professional chain. Let us make the Stanislaus County Medical Society "the strongest," even if not the longest, chain in California.

We Can Do It, If You and I Do Our Part

The greatest evidence of willingness is attendance.

Let the man who expects organized medicine to protect him in time of need contribute to the life of his society, by his attendance.

Let us make the following year the best year our society has yet enjoyed.

We Can Do It—With Your Help

Last year brought several excellent men to us with valuable papers. The programs for the ensuing year will be even better.

A Definite Resolution

"I will attend every meeting of my society this year"—will do it."

BUTTE COUNTY

Butte County Medical Society (reported by J. O. Chiapella, secretary)—The society met on September 20 at the office of Dr. Chiapella, with the following members present: Baumeister, Browning, Hamilton, Schell, Stansbury, Gatchell, Moulton, Johnson, Poole, Enloe, Chiapella. The meeting was for the purpose of an address by N. T. Enloe on his proposed new \$750,000 hospital and to give the physicians of Chico and vicinity an opportunity to endorse the project. Following Enloe's clear and logical expression of his ideas, a motion to fully endorse his project met with unanimous approval of the society.

CONTRA COSTA COUNTY

Contra Costa County Medical Society (reported by L. St. John Hely, secretary)—The Contra Costa County Medical Society met in regular monthly session September 29 at the residence of J. T. Breneman at El Cerrito.

Discussions were held in reference to educating the general public in regard to scientific medicine. The subject was introduced by Hely, stating that the public were not to be blamed for patronizing the cults, as they did not know the difference between scientific medicine and quacks and had no way of knowing, it being brought out that students in the grammar school and the high schools were not even studying common school physiology at the present time. This used to be the sheet anchor of the layman, but, as stated, the man growing up at present knows little about the human or animal body and, of course, has no way to judge. It was suggested that speakers should be lecturing regularly in the churches and in the schools. Emmett Rixford led the discussion.

The paper of the evening—we may say the lecture—was given by Emmett Rixford, and to say that it was a lecture and a complete one would be to state it mildly. The doctor brought out many essential points in the operation of gastric ulcer that makes between success and failure. His wide experience has made his lectures very valuable, and the society wishes to have him lecture again in the future, and is very grateful to him for making the trip. The following members were present and enjoyed the hospitality of Breneman:

U. S. Abbott, C. R. Blake, George M. Bumgarner, John Beard, J. T. Breneman, P. C. Campbell, F. S. Cook, H. L. Carpenter, W. E. Cunningham, C. L. Gregory, L. St. John Hely, Denninger-Keser, E. C. Love, W. S. Lucas, J. B. Spalding, Clara Spalding, S. H. Marks, Hall Vestal, Lloyd A. Clary, C. L. Ianne, T. Lisle Horne, J. Emmett Clark; Miss Agnes Driscoll, Miss Yaub, Cottage Hospital, Richmond; Mrs. Elizabeth Redmond, R. N.

MERCED COUNTY

Merced County Society (reported by Brett Davis, secretary Merced County Medical Society)—The medical society has not held any meetings during the summer.

Mercy Hospital—The new community hospital at Merced is just about completed, and equipment is arriving. It should be in operation very soon.

MONTEREY COUNTY

Monterey County Medical Society (reported by T. C. Edwards, secretary)—The society met on October 5 at El Adobe Hospital, Monterey. There was no regular program, and the evening was spent discussing matters of general interest.

A resolution was passed instructing the secretary to give the local newspapers a copy of the resolutions passed by the A. M. A., calling attention to the unethical conduct of members of the profession prescribing alcohol illegally, and urging county societies to discipline members who are thus debauching their profession.

D. Brumwell, who has been at Indio looking after his date interests, has returned to his home in King City.

SAN BERNARDINO COUNTY

San Bernardino County Medical Society (reported by E. J. Eytinge, secretary)—The society met on October 2 at the County Hospital, with thirty-seven members present, forty-three absent, and twenty guests. Dinner was served.

The program consisted of an address by the retiring president, Frank Folkins, on "Roentgenological Impressions of an Eastern Trip," and a paper by E. H. Hammell on "Eye Symptoms in Neurologic Practice."

The following officers have been elected for this year: President, J. H. Evans, Highland; first vice-president, E. L. Tisinger, San Bernardino; second vice-president, A. T. Gage, Redlands; secretary-treasurer, E. J. Eytinge, Redlands.

H. W. Vollmer of Loma Linda was transferred to Los Angeles County and J. S. Reekie of Ontario was transferred to Riverside County.

SAN DIEGO COUNTY

San Diego County Society (reported by Robert Pollock)—During September the county society enjoyed three clinical programs—one at each of the staff hospitals, San Diego County General, St. Joseph's, and Paradise Valley. In each case members of the hospital staff presented and discussed some very interesting clinical material. The program at the County General included (1) a group of children presented by Thornton, (2) a fracture of the twelfth dorsal vertebra without nerve injury pre-

sented by Harding, (3) a right hemiplegia following a fractured skull presented by Little, and two extensive superficial carcinomas presented by Wicherski. The clinical night at St. Joseph's Hospital developed into a symposium on anesthesia participated in by a large number of the staff. The evening spent at Paradise Valley Sanitarium commenced with an excellent dinner, served by the management, which was followed by a tour of the new 100-bed addition to the hospital, after which the following program was presented: (1) Case of Madura foot presented by Warren of the staff; (2) Case of atrophic arthritis presented by Falkner; (3) Case of chronic endarteritis obliterans presented by Butterfield. These cases were liberally discussed by members of the society present.

October 9, in the society's regular meeting place, Science Hall, B. J. O'Neill gave a talk on his observations of the European surgical clinics visited by him.

SAN FRANCISCO COUNTY

San Francisco County Medical Society (reported by J. H. Woolsey, secretary)—During the month of September, 1923, the following meetings were held:

Tuesday, September 11—General Meeting. (1) The California Pandemics of the 1820s and 1830s, Edward W. Twitthell; (2) Shakespeare as an idealist in the practice of medicine, C. H. Arnold; (3) Some phases of medical history, W. C. Alvarez.

Tuesday, September 18—Committee on Surgery. (1) Mistakes in general surgery, A. S. Keenan; (2) Tuberculous peritonitis, A. J. Lartigau; (3) A device for temporary control of certain intestinal fistulae, Francis Williams.

Tuesday, September 25—Committee on Eye, Ear, Nose, and Throat. (1) Demonstration of cases; (2) Discussion of lateral sinus thrombosis with report of cases, Arthur Collis Gibson; (3) Report of cases of marked visual defects in drivers of automobiles. Discussion tending toward proper legislation, Walter Scott Franklin.

University of California Medical Society Meeting (reported by William J. Kerr, secretary)—At the September meeting of the University of California Medical Society three papers were presented. E. L. Bruck, L. W. Skelton, C. M. Pearce presented a case of coccidioides and discussed the differential diagnosis of this condition from other granulomata. It was shown that the disease is almost entirely limited to the valley regions of California, and that the diagnosis is usually easily made from an examination of the discharges from the sinuses or wherever exudate may be obtained. The high mortality was emphasized, and the need of more specific therapeutic measures was suggested. The patient under discussion was shown to be greatly improved after the use of vaccine prepared from the organism.

W. C. Alvarez gave a lantern-slide demonstration of illustrations from medical history showing the progress of various branches of medicine.

E. L. Walker discussed the chemotherapy of bacterial infection, emphasizing the great value of chemotherapy, especially in the protozoan diseases, and spoke of the progress that had been made in developing chemical substances for the control of bacterial infections. He mentioned the brilliant results that had been obtained by certain chemicals in the destruction of bacteria in the test-tube which have not been attended with great success when applied clinically, but felt that by approaching the problem from the standpoint of organic chemistry, by the preparation of a large number of chemical substances of non-bactericidal properties certain suggestions would be obtained for further investigation.

The November meeting of the society will be held on Thursday, November 22, at 8 p. m., in Toland Hall, in the University of California Hospital. The medical profession is invited to attend.

St. Luke's Hospital Clinical Club Meeting—St.

Luke's Hospital Clinical Club resumed its regular meetings after the summer vacation on Tuesday, October 2, with a paper and case report by J. Marion Read on Roentgen-Ray Therapy in Thyrotoxicosis—Its value as measured by the basal metabolic rate. Read reported fifty cases which had been under observation in St. Luke's Hospital, showing charts and lantern-slides. He compared the result following X-ray therapy, surgery, and expectant treatment.

These meetings are held on the first and third Tuesdays of each month in the assembly room of the Clinic building, following a buffet luncheon. Subjects for subsequent meetings are:

November 6—Blood Transfusion.

November 20—Deep Therapy and X-Ray.

December 4—Cardiac Neuroses.

December 18—Discussion of Pan-Sinusitis and Suggestions for Treatment.

San Francisco doctors and out-of-town men interested in graduate work will be welcome at any of the Clinical Club meetings.

Mount Zion Hospital Notes (from surgical service of C. G. Levison)—Incision for appendectomy in relation to the most marked area of tenderness. During the past two months there have been several cases of appendicitis with a noteworthy sign—pain and tenderness in the right lower quadrant, but the most marked area of tenderness at, or just above, the umbilicus. This was taken into consideration in each case, and a right rectus incision made with its midpoint at the level of the umbilicus, corresponding to the most marked area of tenderness. In all cases the appendix was found high up in the abdomen at about the level of the umbilicus, and the operation was carried out with comparative ease as to what it might have been if the usual low right rectus incision had been made. Levison has previously called attention to the advantage of making the incision for appendectomy correspond to the area of greatest tenderness, in an article appearing in the *Journal of the A. M. A.*, July 21, 1908, entitled "Lumbar Appendectomy."

St. Joseph's Hospital Staff Meetings—The staff of St. Joseph's Hospital held an interesting meeting on October 10. Harold Wright of the Section on Neuropsychiatry spoke on "Neurocirculatory Asthenia," and Paul Castellun on "Modern Treatment of Appendicitis." Alex Keenan opened the discussion on the similarity of the first subject with functional heart disease and the advantages of the Ochsen treatment. Cases were presented by Sherman Tuttle (appendicitis, with hemorrhagic complication and cholelithiasis), A. S. Musante (carcinoma of the uterus and bowels), H. A. Deering and C. E. Smith (cholelithiasis and cholemia).

The program announced for November 14 includes "Survey of Our Hospital Records, Picked at Random," by Dr. William Quinn; and "Value of Private Case Records; Types," by Philip King Brown.

SAN MATEO COUNTY

San Mateo County Medical Society (reported by William Otis Callaway, secretary)—The society met on September 26 at the Mills Memorial Hospital, San Mateo, with sixteen members present, seven absent, two visitors, and two new members. The program consisted of a talk with radiograms on "X-ray and Appendicitis (Chronic)," by M. P. Burnham of San Francisco, followed by discussion by members of the society.

J. G. Null, Redwood City, and M. D. Lessard, South San Francisco, were admitted to membership.

San Mateo County Community Hospital at Beresford was opened September 10. The new hospital is constructed to accommodate one hundred or more beds, and additional facilities will be added as needed, under present plans. Wood C. Baker of San Mateo is medical superintendent of the hospital. The old County Farm will be operated solely for

those needing a home, and all patients have been removed to the new institution.

SANTA BARBARA COUNTY

Santa Barbara County Medical Society (reported by A. C. Soper Jr., secretary)—The meeting of October 8 was called to order at 8:15 p. m. at Cottage Hospital, President Means in the chair. There were present fourteen members, three internes, Varick of Manchester, N. H.; and Carl W. Rand of Los Angeles.

A case of molluscum epitheliale was exhibited by Luton and Ullman; eighteen year old girl, lesions existed since early childhood; improving under sulphur ointment and occasional fulguration.

Carl W. Rand of Los Angeles presented the topic of "Some Phases of Spinal Cord Tumors," illustrated with charts of nerve symptoms, X-ray pictures, and pathological slides—all by lantern-slides. Ten cases were described. Discussion participated in by Robinson, Hotchkiss, Stevens, Rexwald Brown, Ullman, and Nuzum.

Correspondence from A. M. A., State Headquarters, Cottage Hospital, National Tuberculosis Association, California Tuberculosis Association, Gorgas Memorial Fund, Surgical Film Co., Lowy Medical Film Corporation, and various individuals was read.

Rexwald Brown introduced a discussion of the subject of the City Health Department, and moved that:

"The City Manager be urged to secure at once, in conformity with the City Charter, a trained sanitarian at an adequate salary, as head of the City Health Office, that the department may be reorganized to function in conformity with the needs of the city."

This was seconded by Ullman, and after discussion passed unanimously.

New St. Francis Hospital Occupied—The patients housed in the old St. Francis Hospital, Santa Barbara, have been transferred to the new building recently completed and which has been under construction for months. The Rev. Father William Clark, chaplain of the hospital, and Father Joseph Rhode, vice-provincial of the old Mission, officiated at the opening ceremonies held on September 11, although the official dedication of the building will not take place until January. The new hospital contains more than sixty-five rooms, and in an emergency can care for more than one hundred patients, it is stated.

SONOMA COUNTY

Sonoma County Medical Society (reported by N. Juell, secretary)—The society met at Santa Rosa, October 11, with thirteen members present, twenty-two absent, and two visitors. The program consisted in a report of a case, by Marguerite J. Fulmer of Santa Rosa, of chronic diarrhoea in a child, caused by intolerance of starch and fat, and relieved by exclusive protein diet. A discussion of pituitary diseases and tumors, with presentation of cases of acromegaly; pituitary tumor causing nasal and gustatory hallucinations, and a case of Froelich's syndrome, tumor, eye lesions, X-ray plates, operative procedure, and end results was given by Clement H. Arnold of San Francisco.

Councilor McLeod reported the action of the council at its recent meeting regarding medical and indemnity defense, as well as proposed extension courses.

A memorial tribute to the late Jackson Temple was read, and is published in another part of the Journal.

STANISLAUS COUNTY

Stanislaus County Medical Society (reported by R. E. Maxwell, secretary)—The society met on October 12, at Hotel Modesto, beginning with dinner. The meeting was called to order by Presi-

dent McPheeters. Members present: B. F. Surrhyne, Carl B. Benson, F. R. McKibbin, J. R. Hosmer, J. K. Morris, J. L. Hennemuth, J. C. Robertson, Walter Smith, L. D. Mottram, John A. Cooper, C. E. Finney, E. R. McPheeters, E. F. Reamer, Hugh Smith, J. W. Morgan, E. V. Falk, G. Chipman, R. E. Maxwell. Visitors: Didier of Crows Landing, Edwin I. Bartlett of San Francisco.

Miss Myrtle Gray, city school nurse, addressed the society, with a report of her work accomplished in the past two years. She asked for suggestions from and co-operation with the Modesto physicians.

Frank Holtham, city sanitary inspector of Modesto, appeared before the society, asking that a committee of five physicians be selected and appointed to act as a medical milk commission, in order that dairies who desired to meet the requirements thereof might have the distinction of marketing "certified milk." President McPheeters stated that he would appoint such a committee in the near future. Holtham filed a copy of "Spreading the Gospel of Clean, Raw Milk," with the secretary for reference.

E. V. Falk presented a case report of a fracture at lower extremity of humerus that resulted in a status of myositis ossificans. X-rays of the case were displayed.

E. F. Reamer reported that the Modesto Chamber of Commerce did not make any contribution to aid in paying for the A. M. A. convention program booklet advertising Stanislaus County.

R. W. Brace, formerly of Ripon but now residing in San Diego, was granted a transfer from this society.

Edwin I. Bartlett of the University of California addressed the society on "Aspects of Cancer of the Breast," supplemented by lantern-slides. Bartlett's address was practical and interesting and free from theoretical technicalities, and a vote of thanks was extended him.

Treatment of Encephalitis—For more than two years Ross Moore, Los Angeles (Journal A. M. A., September 15, 1923), has been treating certain patients showing symptom groups referable to basal ganglions by injecting intraspinally their own blood serum, either straight or inactivated. Twelve or fifteen cases of chronic paralysis agitans have been treated by this method. In more than half these cases, improvement occurred, temporary in nature, but of a quality different from that seen in the course of other treatment. This improvement has been usually in the nature of muscular relaxation. Relief from tremor has not been marked. All patients having a well-developed tremor of long standing, continued to have it even though very great muscular relaxation was secured. There were several cases of very acute encephalitis in which the progress was apparently uninfluenced by the injections. There appeared to be overwhelming infection, as if the protective mechanism of the body was not functioning. Rosenow's experimental anti-encephalitis serum was used in half a dozen cases. In four cases it was given intravenously twenty-four hours before blood was taken for intraspinal use. In the other two it was given intraspinally. Although results were negative, the efficacy of the serum is not disproved thereby, because the cases treated were very extreme ones. In the present state of our knowledge we are unable to say just when nerve cells that are being attacked by infectious disease or toxic processes die. They may be poisoned and inactive functionally a long time before they actually die. If they are inactive functionally, their inactivity will give rise to the same symptoms as their later death. Functional inactivity anywhere in the body is amenable to treatment. Therapeutic effort in the immediate future should be along two lines: (a) an increase in the antitoxic qualities of the blood serum used for injection, and (b) application of the serum more directly to the seat of the trouble.

Nevada State Medical Association

HORACE J. BROWN, M. D., Reno.....President
 CLAUDE E. PIERSALL, M. D., Reno...Secretary-Treas.
 G. L. SERVROSS, M. D., Reno...Assoc. Editor for Nevada

REPORT OF THE TWENTIETH ANNUAL MEETING

First Meeting—September 28, 9:55 a. m.

The twentieth annual meeting of the Nevada State Medical Association was called to order by the first vice-president, A. Huffaker, at 9:55 a. m., at Bowers mansion. On motion the reading of the minutes was laid over until the regular business meeting. J. E. Rickard moved that the secretary be instructed to convey to our president, J. L. Robinson, our sympathy in his illness and our regrets that he is unable to be present. Seconded by J. T. Rees, M. A. Robison moved an amendment to include George McKenzie in the resolution. Amendment accepted by proposer and second. Motion carried. After a few remarks of welcome by the vice president, he opened the regular program by reading the president's address, after which the first paper of the scientific program was called for. The program was as follows:

A. W. Morton, San Francisco—"Report of a Case of Acute Osteomyelitis of the Femur." Discussed by J. T. Watkins, R. A. Bowdle, C. F. Welty, A. P. Lewis.

William N. Kingsbury, Reno—"Generalized Osteitis Fibrosa Cystica." Discussion by A. W. Morton, T. W. Bath, A. R. Kilgore.

James T. Watkins, San Francisco—"Infection of Certain Lymphatic Glands which Stimulate Tuberculous Disease of Neighboring Joints." Discussed by A. R. Kilgore, W. A. Shaw, W. M. Edwards, J. E. Pickard, W. N. Kingsbury.

Charles P. Knight, U. S. P. H. S., Washington, D. C.—"Some Observations on Health Conditions in Nevada." Discussed by T. W. Bath, R. A. Bowdle, R. H. Richardson, W. H. Hood, H. J. Brown, M. R. Brawner.

At this point we adjourned for lunch, which was served on the open front veranda of the mansion. Called to order at 1:30 p. m.

Martin Molony, San Francisco, opened the afternoon session with his paper on "Congenital Diverticulum of the Posterior Urethra, with Some Remarks on the Modern Method of Treating Chronic Seminal Vesiculitis. Illustrated by lantern slides. Discussed by G. F. Farman, B. H. Caples, W. H. Hood, R. St. Clair, and A. Huffaker.

Thomas Wilbur Bath, Reno—"Resumé of the Treatment of Septic and Aseptic Wounds." Discussed by C. G. Wilson, M. L. Herzig, C. L. Hoag, C. P. Knight, R. St. Clair, A. W. Morton, S. M. Sproat and C. F. Welty.

R. A. Bowdle, East Ely—"Injuries to the Astragalus, Report of a Case." Discussed by C. L. Hoag and R. A. Bowdle.

Charles L. Tranter, San Francisco—"Functional Recovery Following Operative Treatment of Brain and Nerve Injuries." Illustrated by lantern slides. Discussed by S. K. Morrison, C. F. Welty, A. P. Lewis, and A. W. Morton.

Maxmillian L. Herzig, Seattle, Wash., Member of this Association—"Undescended Testicle Complicating Acute Appendicitis, Report of a Case." Discussed by S. M. Sproat, C. L. Hoag and M. L. Herzig.

George F. Farman, Los Angeles—"Some Types of Chronic Recurrent Pyelitis and Their Treatment." Discussed by M. Molony and G. F. Farman.

Second Meeting—September 28, 8 p. m.

The business meeting was called to order by the second vice-president, R. H. Richardson, in the ab-

sence of the president and first vice-president. W. A. Shaw moved that the reading of the minutes be dispensed with. Seconded by C. E. Piersall. Motion lost. The minutes of the last regular and special meetings were read and approved.

A communication from the American Medical Association regarding clinical laboratories was read. Moved by M. A. Robison, seconded by W. M. Edwards, that it be referred to the Judiciary Committee to take such action as may seem necessary, and to reply to the letter. Carried.

A communication from The American Peace Award Committee was read. This referred to the \$100,000 award offered by Edwin Bok for the best plan to promote peace. Moved by M. A. Robison, seconded by M. R. Walker, that communication be laid on the table. Carried.

Communication from the California State Medical Society, regarding subscriptions to the California Medical Journal, read. Moved by M. A. Robison, seconded by T. W. Bath, that our annual dues be raised to \$7, and the extra \$2 be sent to the California Medical Journal so that our members may receive that publication. Carried.

The Committee on Necrology reported the deaths of G. E. Leavitt of Yerington, and W. D. Row of Carlin, and presented resolutions. Moved and seconded that resolutions be adopted. Carried.

The Judiciary Committee reported its activities during the past year, with especial reference to the work done during the recent session of the Legislature, which included work on the bills to register nurses, establish public hospitals, personnel of the medical examining board, prohibition, the handling of poisons by general merchandise stores, and the Sheppard-Towner bill. Moved by C. E. Mooser, seconded by A. P. Lewis, that the report be accepted. Carried. The delegate to the A. M. A. then made his report. Moved by A. P. Lewis, seconded by C. E. Mooser, that report be accepted. Carried.

The following officers were elected for the year 1924: President, Horace J. Brown, Reno; first vice-president, William M. Edwards, Yerington; second vice-president, A. C. Olmstead, Wells; secretary-treasurer, Claude E. Piersall, Reno; trustee for three years, A. Parker Lewis, Reno; associate editor of the California Journal, G. L. Servross, Reno.

The secretary then presented the names of the following as applicants for membership: George W. Green, Ely; John B. McCann, Tonopah; R. L. Guffey, Tonopah; W. F. Boylan, Bridgeport, Cal.; Marc H. Crocker, Winnemucca; Mary H. Fulstone, Smith; F. J. Crane, Round Mountain; F. C. Pache, San Diego, Cal. (reinstated).

Besides these applicants there were a number elected by the Washoe County Society, on whom it was not necessary for the State association to vote. Moved by A. P. Lewis, seconded by M. A. Robison, that all applications be voted on at once. Carried. Moved by A. R. DaCosta, seconded by M. M. Carmichael, that applicants be elected to membership. Carried.

S. K. Morrison announced that the Washoe County society would pay any deficit in the expenses of the meeting. Moved by H. J. Brown, seconded by C. E. Piersall, that a vote of thanks be tendered the Washoe County society. Carried.

C. E. Mooser moved, seconded by S. K. Morrison, that a vote of thanks be extended to our visitors, and that those of them who have not heretofore been elected as honorary members be now so elected. Carried.

A. P. Lewis moved, seconded by T. W. Bath, that a vote of appreciation of the services of the retiring secretary-treasurer be extended to him. Carried.

In the matter of the time and place for holding the next annual meeting, it was moved by M. A. Robison, seconded by A. P. Lewis, that the selection be left to the incoming officers, as before. Carried. There being no further business, adjournment was

declared until 9:30 a. m., Saturday, when the scientific program was resumed at Bowers Mansion.

Third Meeting, September 29

Meeting called to order at 9:45 a. m., at Bowers Mansion, by A. Huffaker, first vice-president, who introduced as our most prominent guest of honor, Ray Lyman Wilbur, president of the American Medical Association, and president of Stanford University. Wilbur addressed the association for twenty-five minutes in his usual able and entertaining manner, and made a profound impression upon his audience.

Carl G. Wilson, Palo Alto, Cal., then continued the program with a paper entitled: "A Plea for Improvement in Post-Operative Care of Laparotomy." Discussed by A. R. Kilgore, A. P. Lewis, C. L. Hoag, A. W. Morton, R. A. Bowdle, J. T. Watkins, M. L. Herzig.

William A. Shaw, Elko—"A Peculiar Manifestation of Focal Infection. Treatment and Apparent Cure; Three Case Histories." Discussed by A. W. Morton, C. F. Welty, C. P. Knight, E. S. duBray, R. H. Richardson, A. Huffaker.

Alson R. Kilgore, San Francisco—"Syphilis as a Pre-Cancerous Condition." Discussed by Walter Wessels, Ray Lyman Wilbur, C. F. Welty, G. F. Farman, and A. Huffaker.

Claude E. Piersall, Reno—"Present Status of X-ray and Radium Therapy." Discussed by A. R. Kilgore, M. R. Walker, C. F. Welty, and C. E. Piersall.

Cullen F. Welty, San Francisco—"The Care of the Hearing Apparatus." Discussed by M. L. Herzig.

Carl L. Hoag, San Francisco—"The Importance of Selecting Proper Treatment in Each Type of Goiter."

Raymond St. Clair, Oakland, Cal.—"Exophthalmic Goiter. Importance of Early Diagnosis; Report of Four Cases." The two papers above were discussed by C. P. Knight, T. W. Bath, M. A. Robison, M. L. Herzig, C. L. Hoag, and R. St. Clair.

S. M. Sproat, Portola, Cal.—"Perforative Appendicitis. Appendectomy vs. Drainage." Discussed by M. L. Herzig, and C. L. Hoag.

Walter Wessels, Los Angeles—"Errors in Abdominal Diagnosis." Discussed by M. A. Robison, A. J. Hood (Elko), and W. Wessels.

Ernest S. duBray, San Francisco—"Diet Adjustment and Insulin Therapy in Diabetes Mellitus." Discussed by W. Wessels, C. W. West, and I. J. Sellers.

B. H. Caples, Reno—"Bladder Decompression." Discussed by G. F. Farman.

This completed the program, and on motion and second the association stood adjourned sine die. A banquet at 9 p. m. and a barbecue picnic at Pyramid Lake, September 30, concluded a most successful meeting.

HORACE J. BROWN, Secretary.

The following members were in attendance at various times during the meeting: A. Huffaker, M. R. Walker, W. M. Edwards, A. P. Lewis, C. E. Mooser, W. J. Circe, T. W. Bath, L. V. Smith, Alex McIntyre, G. L. Servoss, J. W. Davis, W. C. Lucas, Anna DeChene, J. E. Pickard, V. A. Muller, H. L. Dalby, W. N. Kingsbury, S. K. Morrison, R. St. Clair, Donald Maclean, M. M. Carmichael, C. W. West, D. A. Turner, M. R. Brawner, J. T. Rees, M. A. Robison, J. A. Fuller, H. J. Brown, B. H. Caples, M. L. Herzig, C. E. Piersall, W. H. Riley, A. J. Hood (Elko), G. L. Dempsey, W. A. Shaw, R. A. Bowdle, R. H. Richardson, E. E. Hamer, W. H. Hood, A. J. Hood (Reno), G. M. Gardner, A. R. DaCosta, A. C. Olmstead, W. L. Samuels, C. H. Lehnars.

The following visitors were also present at various times during the meeting:

A. W. Morton, C. L. Tranter, R. C. Glann, Martin

Molony, I. J. Sellers, S. M. Sproat, G. W. Tape, G. Y. Brown, Mrs. M. L. Herzig, C. F. Welty, C. L. Hoag, G. F. Farman, C. P. Knight, W. G. Young, A. L. Thompson, G. E. Pawbreen, Mrs. C. G. Wilson, J. T. Watkins, E. S. duBray, Walter Wessels, P. K. Watters, W. A. Lavery, Theo. Olmsted, Mrs. S. M. Sproat, B. Wilkinson, C. G. Wilson, A. D. McKenney, A. R. Kilgore, C. B. Cortright, W. W. Peterson, R. L. Wilbur, Mrs. O'Brian, E. Devan.

J. LaRue Robinson, Reno, past president of the State association, has been confined to his home as the result of a gunshot wound in his right foot, received September 17, when his gun was accidentally discharged.

Granville E. Leavitt (Yerington), Cooper Medical College, 1903, was drowned September 18 near Wellington, Nev., while hunting ducks. Age 51 years.

William D. Row, Carlin, College of Physicians and Surgeons, Baltimore, 1883, died in a hospital in San Francisco, September 19. Age, 62.

W. W. Cook, Ely, has disposed of his practice and gone to Sebring, Fla., for the winter. He will return to Nevada in the spring, and resume practice in a new location.

A Side Light from the Source on Osteopathy—In 1874, Andrew T. Still founded osteopathy. He tells about it in his autobiography. He tried to get started in Kansas, but the powers at Baldwin University refused to permit him to expound his doctrines at that institution. In May, 1875, he was in Kirksville, Mo. It appears that he rather anticipated having a hard time, and he tells that his wife promised to stand by him and help him fight his battle. At this point in his story he presents a little incident which we have thought worth quoting:

"I did not tell her [his wife] that when I came to Missouri I found a letter addressed to my brother Edward, from brother Rev. James M. Still of Eudora, Kans., stating that I was crazy, had lost my mind and supply of truth-loving manhood. I read it and thought, as the eagle stirreth up her nest, so stir away, Jim, till your head lets down some of the milk of reason into some of the starved lobes of your brain. I believed Jim's brain would ripen in time, so I let him pray, until at the end of eighteen years he said:

"Hallelujah, Drew, you are right; there is money in it, and I want to study 'Osteopathy.'" (Journal A. M. A., September 29, 1923.)

Active Immunization Against Diphtheria in Private Practice—Frank C. Neff, Kansas City, Mo. (Journal A. M. A., September 1, 1923), urges that the medical profession be aroused to the need and usefulness of active immunization to diphtheria. Routine private practice must include the education of families in the use of toxin-antitoxin. It is obvious that the medical profession will be the final authority with the public as to the desirability of diphtheria immunization. The systematic administration of toxin-antitoxin is easy, and if employed in private practice the demand for it will eventually reach throughout the community. The use of refined toxin-antitoxin as now available is safe, and the physician need have no hesitancy in making diphtheria immunization a part of his regular work. It is conservative to state that 90 per cent of persons receiving toxin-antitoxin develop immunity, and that there is a small percentage of persons who develop antitoxin poorly, if at all. That there are a few exceptions can be recognized. No child should be accepted as certainly immune until a negative Schick test is obtained.

BOOK REVIEWS

Food for the Diabetic. What to eat and how to calculate it with common household measures. By Mary Pascoe Huddleson. 75 pp. New York: Macmillan Company. 1923. Price \$1.25.

A useful guide. It will prove a welcome manual for the doctor to put into the hands of his diabetic patients. L. E.

Digestive Disturbances in Infants and Children. (Annals of Roentgenology. A series of monographic atlases.) Roentgenologically considered by Charles Gilmore Kerley and Leon Theodore LeWald. Vol. 3. New York: Paul B. Hoeber. Price \$12.00.

A splendid atlas of roentgenograms of disturbances of the digestive tract in children. Its thoroughness and completeness do credit to the authors and its beauty to the art of bookmaking.

These monographs from the Annals of Roentgenology are monuments of the best there is in American workmanship. L. E.

Getting Ready To Be a Mother. A little book of information and advice for the young woman who is looking forward to motherhood. By Carolyn Conant Van Blarcom. R. N. 237 pp. Illustrated. New York: The Macmillan Company. 1922.

Carolyn C. Van Blarcom has written a very useful book to all interested in the problem of maternity.

It is written to be easily understood by the layman and reminds the patient that she must consult her physician early in pregnancy and at any time she has any complaint. It should be of much value in educating the expectant mother.

C. D. H.

BOOKS RECEIVED

A Textbook of Chemistry for Nurses. By Fredus N. Peters, Ph. D., Author of "Experimental Chemistry," "Laboratory Experiments," "Applied Chemistry," etc.; formerly Professor of Chemistry and Director of Laboratories, Kansas City College of Pharmacy; Professor Organic Chemistry Hahnemann Medical College; Instructor in Chemistry in Kansas City Central High School for twenty-three years; more recently Vice Principal. Illustrated. Second Edition. St. Louis: C. V. Mosby, 1923.

Principles of Bacteriology. By Arthur A. Eisenberg, M. D., Director of Laboratories, St. John's Hospital; Pathologist to Lakewood Hospital; Serologist to St. Ann's Hospital, Cleveland; Director of Laboratories, Mercy Hospital (Canton, Ohio). Second Edition. St. Louis: C. V. Mosby Company, 1923.

Obstetrics for Nurses. By Charles B. Reed, M. D., Obstetrician to Wesley Memorial Hospital, Chicago. 144 illustrations, including two color plates. St. Louis: C. V. Mosby Company, 1923.

The Normal Child: Its Care and Feeding. By Alan Brown, M. D., Physician in Chief to the Hospital for Sick Children, Toronto; Associate Professor of Medicine in charge of Pediatrics, University of Toronto, etc., etc. The Century Co., New York and London, 1923.

Physical Diagnosis, By Richard C. Cabot, M. D., Professor of Medicine in Harvard University, formerly Chief of the West Medical Service at the Massachusetts General Hospital. Eighth Edition. Revised and enlarged, with six plates and 279 figures in the text. New York: William Wood and Company. 1923.

The Notebook of an Electro Therapist, By Mel R. Waggoner, M. D. Illustrated. Published by the McIntosh Electrical Corporation, Chicago, Illinois. 1923.

Pennington's "Diseases and Injuries of the Rectum Anus and Pelvic Colon." 679 illustrations, including two plates. Cloth \$12.00. By J. Rawson Pennington, M. D., F. A. C. S., Proctologist to the Columbus Hospital, Veterans' Hospital No. 30, and the United States Marine Hospital. Chairman of the Scientific Assembly, Section on Gastro-Enterology and Proctology, American Medical Association. Published by P. Blakiston's Son & Co., 1012 Walnut street, Philadelphia.

UNIVERSITY OF CALIFORNIA

Office of the President

September 28, 1923.

The Physicians of the State of California:

Gentlemen: The work which Professor Kofoid of the University of California has been conducting for the last five years on the incidence of intestinal parasitism has thrown much light upon some forms of obscure and chronic human diseases. The accurate determination of these infections at present requires considerable technical skill. It is hoped that in the not distant future a larger number of competent technicians may secure the training necessary to extend this service more widely in the usual professional channels. In the meantime it is highly desirable that Professor Kofoid be able to complete his atlas of human intestinal parasitic infections, and also that a number of problems still obscure be carried as near as possible to solution in his laboratory.

To this end the University, through Professor Kofoid's laboratory, will make these examinations for physicians in accordance with instructions issued by the laboratory. The University does not seek to enter the commercial field in any way, and no charge will be made for this service. Any gifts which physicians, or their patients, or other friends of research in this field may wish to make to the Kofoid Research Fund will be administered by the Board of Regents of the University in support of this work.

The expense of the routine examinations made at the request of physicians, dispensaries, public health centers, etc., is now met solely by gifts to this Fund. The State Board of Health through its Hygienic Laboratory at Berkeley co-operates to the extent of sending out the containers and the reports. Applications for containers may be sent to Professor C. A. Kofoid, Zoology Building, University of California, Berkeley.

Yours faithfully,

W. W. CAMPBELL, President.

Chronic Actinic Cheilitis—Samuel Ayres, Jr., Los Angeles (Journal A. M. A., October 6, 1923), calls attention to a chronic inflammatory disorder of the lip, due apparently to the actinic or chemically active rays of sunlight. This chronic, scaly, crusted inflammation of the lips, especially of the lower lip, Ayres designates "cheilitis actinica chronica," or "cheilitis exfoliativa (actinica chronica)." This disorder is usually recurrent during the summer months. Protection from sunlight, and soothing local applications offer the best method of prevention and treatment. Since the etiology and treatment of this variety of cheilitis differ from other varieties, it is felt that this disease should be recognized as a distinct entity.

Pharmacology and Therapeutics

COUNCIL ON PHARMACY AND CHEMISTRY OF THE A. M. A.

(Reported by W. A. Puckner, Secretary)

The Council on Pharmacy and Chemistry reports a number of new remedies admitted to New and Non-official Remedies, as well as some interesting data about other remedies:

Abbott Laboratories—Argyn Tablets (see New and Non-official Remedies, 1923, p. 330).

Parke, Davis & Co.—Tablets Tuberculin B. E. (P. D. & Co.); Tablets Tuberculin T. R. (P. D. & Co.); Malt Extract (Unmedicated) (P. D. & Co.); Malt Extract with Cod Liver Oil (P. D. & Co.); Tobacco Protein Extract Diagnostic (P. D. & Co.); Goldenrod Pollen Protein Extract Diagnostic (P. D. & Co.); Sal Ethyl Capsules, 5 minims.

Wilson Laboratories—(New and Non-official Remedies, 1923, p. 212)—Tablets Ovarian Substance (Wilson), 2 gr.; Tablets Ovarian Substance (Wilson), 5 gr.; Capsules Ovarian Substance (Wilson), 2 gr.; Capsules Ovarian Substance (Wilson), 5 gr.; Tablets Ovarian Residue (Wilson), 2 gr.; Tablets Ovarian Residue (Wilson), 5 gr.; Capsules Ovarian Residue (Wilson), 5 gr.

NEW AND NON-OFFICIAL REMEDIES

Thromboplastin-Lederle—An extract of cattle brain in physiological solution of sodium chlorid prepared according to the method of Hess. For a discussion of the actions, uses and dosage of brain extract see New and Non-official Remedies, 1923, p. 129, under Fibrin Ferment and Thromboplastic Substances. Thromboplastin (Lederle) is marketed in 20 cc. vials which bear an expiration date. Lederle Antitoxin Laboratories, New York. (Jour. A. M. A., September 15, 1923, p. 929.)

Malt Extract (Unmedicated)—(P. D. & Co.)—A preparation essentially similar to extract of malt, U. S. P. (see New and Non-official Remedies, 1923, p. 177), but containing 10 per cent of glycerin. 1 gm. of the extract converts 5 to 7 gm. of starch to maltose and dextrin in 30 minutes at 40 C. Parke, Davis & Co., Detroit.

Malt Extract with Cod Liver Oil (P. D. & Co.)—Each 100 cc. contains Norwegian cod liver oil, 25 cc. and malt extract (unmedicated) P. D. & Co., 75 cc. Parke, Davis & Co., Detroit.

PROPAGANDA FOR REFORM

El Zair—This is quackery's latest offer of an elixir of life. The nostrum is brought to the attention of the public by El Zair, Inc., New York. The firm claims that the elixir of youth has at last been found. Much is made of the endorsement which the late W. T. Stead is stated to have given the nostrum. El Zair is to be dissolved in water and applied by sponging the body with it daily. The A. M. A. Chemical Laboratory analyzed El Zair and reported that essentially it may be considered to consist of one part of glacial acetic acid and three parts of magnesium sulphate (Epsom salt) perfumed with oil of bergamot. The contents of a bottle of El Zair are to be dissolved in a pint of water and, therefore, an essentially similar solution can be made by dissolving 2½ ounces of Epsom salt in a pint of distilled vinegar. (Jour. A. M. A., September 1, 1923, p. 768.)

Some More Miscellaneous Nostrums—The following products have been the subject of prosecution

by the Federal authorities charged with the enforcement of the Food and Drugs Act: Cowan's Rheumatism Herb (Rheumatism Herb Co.), consisting of dried and moldy leaves of a species of eucalyptus. Jad Salts (Wyeth Chemical Co., Detroit—not John Wyeth Bros., Philadelphia), consisting essentially of citric and tartaric acids, salt, baking soda, sodium phosphate and very small amounts of hexamethylenamin, lithium carbonate and potassium bicarbonate. Crane's Quinin and Tar Compound (Crane Medicine Co.), consisting essentially of quinin, sodium salicylate, ammonium chlorid, Epsom salt, oil of anise, tar, menthol, table salt, calcium phosphate, sugar, alcohol and water. Crane's Liver Pills (Crane Medicine Co.), consisting essentially of aloes and magnesium carbonate. Crane's Kidney Pills (Crane Medicine Co.), containing methylene blue, hexamethylenamin, plant extractive and iron sulphate. Tekol (Colonial Tablet Co.), containing ground celery seed and cocoa with about a half grain of caffeine in each tablet. Veronico Water (Veronica Medicinal Springs Water Co.), containing magnesium sulphate (Epsom salt), sodium nitrate, sodium chlorid (common salt), calcium bicarbonate, calcium sulphate and magnesium chlorid. (Jour. A. M. A., September 15, 1923, p. 946.)

MEDICAL ECONOMICS

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The spirit of service is more and more reflected in our advertising pages as each month new departments are being opened by our advertisers and new services offered. For instance, in this issue—

Victor X-ray Corporation place at your service a corps of men trained and placed on the Pacific Coast to serve Victor users primarily and all others interested in X-ray and physiotherapy work. A telephone call, telegram or letter will bring one of these men to you immediately, to assist in the preparing of plans, to suggest equipment adapted to your needs, render service on your present equipment or give help in operative technique. Get acquainted with the man in your particular district and let him help you.

Reid Bros. announce the establishment of a retail store in a location convenient to the up-town offices, to better serve physicians and surgeons, this in addition to their regular show-rooms and factory.

Clark-Gandion Truss Company have installed a completely equipped shop for the making of all kinds of orthopedic appliances, belts, etc. They have seventeen busy people at your command, with offices on both sides of the bay.

Medical and Scientific Books—Mr. J. W. Stacey, formerly of The Emporium, is opening at 228 Flood Building, San Francisco, a complete store of medical and scientific books. Mr. Stacey is well known to our readers, and his new service will be appreciated by his many friends and customers of the past.

Parke, Davis & Company—Dr. Earl Miller has been appointed director of the Department of Experimental Medicine, of Parke, Davis & Company, Detroit, to fill the vacancy following the death of Dr. Ezra Read Larned, who was the originator and organizer of this department and occupied the position as head of the department until his death. Dr. Miller was assistant to Dr. Larned for twelve years and has a wide acquaintance among medical men interested in clinical research work.

THE ABSORPTION OF DRUGS

There seems to be a more or less general assumption that if a drug is soluble in water it will be absorbed in a satisfactory manner when introduced into the alimentary canal or injected into the subcutaneous or intramuscular tissues. A few seem to take the opposite stand, namely, that most drugs are absorbed so poorly from any channel of administration that, to secure therapeutic effects, they must be injected intravenously. Both of these views, according to Cary Eggleston, New York (Journal A. M. A., August 11, 1923), are obviously erroneous. The matter of solubility of a drug in water, he says, bears no necessary relation to the question of its absorbability from the gastro-intestinal tract. Food may retard absorption, through too great dilution of a drug; by the large amount of colloid present; by combining with the drug to form a less absorbable compound, or in other ways. No general rules can be laid down as to the influence of meals on the absorption of drugs, hence this factor must be determined separately for each drug. The increased circulation during digestion may facilitate absorption, and it is probable that mild degrees of congestion from other causes have a similar effect. Several drugs have been shown to be absorbed more promptly when administered in dilute alcohol than when given in water. Other mild irritants, by inducing slight local congestion, will probably be found to produce the same result. If the drug itself is irritant, this property may facilitate its absorption if it is administered in sufficiently dilute solution. Higher degrees of local irritation, however, seem to delay absorption. Whether this is due to injury to the epithelium is not known, but such a mechanism seems probable. Local ulceration of the mucosa, on the other hand, may enhance the absorption of some drugs, especially those toward which the membrane is normally more or less impermeable. Anemia of the alimentary canal probably always impairs absorption of drugs as well as of the products of digestion. The rate of absorption after oral administration may be determined for man in different ways. The degree of uniformity of absorption is just as important as is the rate. Some drugs seem to be taken up from the rectum quite as rapidly and as effectively as when given by mouth, some possibly better; but most are probably much less satisfactorily absorbed.

The liver is capable of fixing and destroying or otherwise eliminating a great many drugs. This fact has been used as one of the arguments against oral administration, as compared with other methods, since drugs so given generally enter the systemic circulation only after initial passage through the liver. Even with a drug that is fixed or destroyed rapidly, a more or less considerable proportion will usually escape change in the liver and enter the general circulation. The oral dose of such a drug will, therefore, merely have to be made sufficiently large to allow for the portion which is destroyed during the first passage through the liver. The assumption that liver fixation or destruction is a serious bar to effective oral administration is not warranted by the common experience of therapeutists. The relation between the rate of elimination and the duration of action of a drug on the one hand, and the rate of its absorption from different channels of administration on the other, determines the mode of administration, the dosage and the frequency of repetition of drugs, except for those few agents whose actions may prove life-saving in circumstances of great urgency, such as strophanthin in cardiac failure and epinephrin in shock.

Until much more definite information is available, oral administration must unquestionably remain the most satisfactory and the most precise method. The dose of a drug may be defined as that amount which will just suffice to produce the desired effect in a given patient under the particular existing conditions. This dose cannot be known in advance, for it is not the same in different patients, nor even in

the same patient at different times. By oral administration, fractions of this dose can be given as often as necessary, until the desired dose is absorbed and the action sought has been developed. By varying the size of the fractions and the frequency of repetition, the required dose can be approximated with greater certainty and precision than by any other method, and the rapidity with which the effects are developed may also be controlled with some degree of accuracy.

The Workmen's Compensation Act The Workmen's Compensation Insurance Act was at first viewed with alarm both by the employer and the medical profession. It was a labor measure and felt to be revolutionary socialism. At the present time it is acknowledged to be a real protection to the employer as well as the employee. Due to the efforts of the council of the State medical society, this act is now becoming a satisfactory arrangement for the medical man.

The insurance carriers started furnishing medical services under this act without reference to the medical profession, set their own fee schedule, required unnecessarily elaborate reports and dictated medical policy as they saw fit. The man who was doing compensation work dealt as an individual with the insurance company.

The council of the State society has put more work upon this insurance problem than upon any other work that has confronted it; for, at first, the insurance carriers refused to recognize or to meet with it, much less co-operate. Four years of effort at a tremendous personal expense has been given to obtain an arrangement that is just to the medical man as well as efficient protection to the insured.

There have been four tangible results that are tending to make the operation of this law satisfactory from a medical standpoint:

1. The insurance carriers have come to deal with the medical profession as a whole, and problems of general policy are made with the advice and consent of the medical society through conferences and written agreements. The ordinary medical man knows nothing of the insurance problems, can form no estimate of rates or fees and is in no position to dictate or defend himself. The council of the State society has acquainted itself with the whole insurance problem, and can and does deal intelligently with the insurance carriers.

2. The State society has obtained the payment of more adequate fees for insurance work. There has been a flat raise of 25 per cent and a real flexibility in emergency procedures, and these changes are now embodied in the rulings of the State Compensation Commission. The entire field of fees was canvassed by the committee and the insurance companies, and such an adjustment could never have been obtained without organized effort.

3. The elaborate and burdensome report system has been simplified and the necessary clerical work reduced to a minimum. The council, through its committee, instigated an investigation of all insurance forms and then produced records and report blanks of its own that represented the standard required by the medical profession as adequate and satisfactory. Most of the insurance carriers have adopted these forms as recommended.

4. The council has extended the insurance field so that the work is open to practically the entire membership of the society. A survey has been made of the qualifications, specialties and willingness to co-operate of each of the society members and such records have become the basis for designated insurance lists. Instead of the work being limited to a few, the council has made it possible for any member of the society to do insurance work.

These are a few of the problems of industrial insurance that are being solved by the State medical society as the result of intensive work by the committees backed by the entire organization.—(Lyell C. Kinney, M. D., Bulletin of the San Diego County Medical Society, August 10, 1923.)

NEW MEMBERS

San Francisco—Elliott B. Tobias, Aime N. Fregeau, Elwood R. Oleson, Herbert S. Thomson, Leon C. Garcia, Irwin Wallace, Louis J. Overstreet, John C. W. Taylor, William H. Barrow.

Los Angeles—Otto R. Brown, Victor E. Verne, J. Park Dougall, Philip I. Hoke, R. A. Krause, H. A. MacMillan, George F. Schenck, Vincent Bonfiglio, William Paul Cook, Leo B. Auerbach, Edward G. Boyd, A. Lincoln Desser, Clement F. Dougherty, Louie Felger, H. G. Hambleton, W. M. Hoel, R. W. Karras, Francis B. Kellogg, Homer R. Keyes, H. B. Lehmberg, Samuel M. Marcus, Benjamin M. Mikels, Alleyne von Schrader, Henry J. Weedn, Carlisle B. Wiley, Burnett W. Wright.

Santa Clara—Richard T. Glycer, Thomas B. Moore.

San Mateo—J. G. Null, M. D. Lessard.

Alameda—Karl E. Kennedy, William G. Donald.

Lassen-Plumas—James McCue.

San Diego—Roy V. Larzalere, James G. Omelvena.

Modesto—John K. Morris.

Obituary

MEMORIAL TRIBUTE TO THE MEMORY OF JACKSON TEMPLE, LATE A MEMBER OF THE SONOMA COUNTY MEDICAL SOCIETY

To Its Officers and Members:

Whereas, our much esteemed and beloved associate, Jackson Temple, has been called from the walks of earth to the other and better world, it is fitting that we, the surviving members of the Sonoma County Medical Society, should pay a last tribute to his memory.

Dr. Temple was born in Santa Rosa, March 9, 1879. His early education was acquired at Mount Tamalpais Military Academy, followed by attendance at the University of California, where he graduated in pharmacy, later taking up the study of medicine, winning his medical degree in 1906. He was well equipped for the practice of his profession, both by education and temperament. Optimistic, resourceful, foremost in scientific research, yet modest and retiring; always prompt to respond to the call of the afflicted; appreciative, generous, punctilious in ethics, possessed of patience, devotion, industry and talent, he was the ideal physician we were proud to honor as one of our most valued associates.

At the outbreak of the World War he was one of the first to offer his services to his country, and was the only representative of the medical profession from Santa Rosa to participate in military activities in France. Coming from distinguished lineage, he lived in this community during his entire life, and carried the name untarnished to the grave. While his departure means a distinct loss to the profession and to the public, it is fortunate that his example stands before us for emulation, and it is for us to profit by the observance of his manifold virtues.

N. JUELL, Secretary.

DEATHS

Barmore, William Alfred. Died at San Francisco, September 26, 1923, age 53. Graduate of the Medical College of Ohio, Cincinnati, 1891. Licensed in 1892. He was formerly a member of the San Francisco County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

Caldwell, Joseph Edmonds. Died at Glendale, October 3, 1923, age 68. Graduate of the Flint Medical College of the New Orleans University, 1881. He was a member of the Florida Medical Association and the American Medical Association.

Gnekow, Emilie Louisa. Died at Stockton, October 4, 1923, age 51. Graduate of the Northwestern University of Chicago, 1901. She was a member of the San Joaquin County Medical Society, the California Medical Association, and the American Medical Association.

Guidinger, Walter A. Died at Long Beach, September 18, 1923, age 42. Graduate of the Chicago College of Medicine and Surgery, 1907. Licensed in California in 1914. He was a member of the Los Angeles County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

Locke, Clayton W. Died at Lindsay, September 26, 1923, age 65. Graduate of the Louisville Medical College, 1888. Licensed in California in 1912. He was a member of the Tulare County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

Murphy, William Roe. Died at Los Angeles, October 18, 1923, age 55. Graduate of the College of Physicians and Surgeons, Los Angeles, 1918. He was a member of the Los Angeles County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

Newlon, William Henry. Died at Berkeley, October 30, 1923, age 60. Graduate of the College of Physicians and Surgeons, Keokuk, Iowa, 1890. He was a member of the Iowa State Medical Society and a Fellow of the American Medical Association.

Purves, John. Died at Oakland, August 12, 1923, age 56. Graduate of the College of Physicians and Surgeons, San Francisco, 1899. He was a member of the Alameda County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

Reardon, Thomas Buckhead. Died at Oroville, September 28, 1923, age 63. Graduate of the University of California Medical School, 1882. Licensed in California, 1885. He was a member of Butte County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

Row, William D. Died at San Francisco, September 19, 1923, age 61. Graduate of the College of Physicians and Surgeons, Baltimore, Maryland, 1883. He was a member of the Nevada State Medical Association and the American Medical Association.

Saylin, Abraham J. Died at Los Angeles, August 6, 1923, age 41. Graduate of the College of Physicians and Surgeons, Los Angeles, 1915. He was a member of the Los Angeles County Medical Association, the California Medical Association, and a Fellow of the American Medical Association.

Stratton, Leon B. Died at Paso Robles, August 7, 1923, age 47. Graduate of the Saginaw Valley Medical College, Saginaw, Michigan, 1899. Licensed in California, 1901. He was a member of the San Luis Obispo County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

California State Journal of Medicine

OWNED AND PUBLISHED MONTHLY BY THE CALIFORNIA MEDICAL ASSOCIATION

BALBOA BUILDING, SECOND AND MARKET STREETS, SAN FRANCISCO

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VOL. XXI

DECEMBER, 1923

No. 12

ORIGINAL ARTICLES

RESPONSIBILITY FOR STATEMENTS AND CONCLUSIONS IN ORIGINAL ARTICLES

The author of an article appearing in the JOURNAL is entirely responsible for all statements and conclusions. These may or may not be in harmony with the views of the editorial staff. Furthermore, authors are largely responsible for the language and method of presenting their subjects. All manuscripts will be carefully read, but editorial privileges will be exercised only to a very limited extent. It is believed that the manner of presentation of any subject by any author determines to no small degree the value of his conclusions. Therefore, both the author and the reader, in our opinion, are entitled to have the subject as presented by the author as little disturbed as possible by the editors. However, the right to reduce or reject any article is always reserved.

THE TREATMENT OF HYPERTENSIVE VASCULAR DISEASE*

By WILLARD J. STONE, M. D., Pasadena, California

In articles upon this subject written nearly ten years ago, my main contentions covered the clinical fact, verified upon many occasions, that the majority of all patients manifesting arterial hypertension fell into one of two groups designated as follows: (1) The cardiac type of hypertension, or (2) the cerebro-renal type of hypertension.

It was also suggested that the term vascular disease, as described by Richard Bright in 1836, be used to cover in a broad sense, and until more definite knowledge was available, the symptom-complex of arterial hypertension with its associated or concomitant cardiac, renal, and cerebral symptoms.

A study of the literature of the past two decades has shown that:

1. It has not been proven that arteriosclerosis, many times associated with hypertension, is the cause, *per se*, of this symptom.

2. Many patients with evident sclerosis do not manifest hypertension while arteriosclerosis and nephritis of the vascular type may exist without earlier history of antecedent or concomitant hypertension.

3. Vasomotor spasm involving the smaller arte-

rioles and pre-capillary areas may, however, still be regarded as a tentative explanation of hypertonus.

4. It has not been proven that the primary cause of the majority of instances of hypertension has originated in a nephritis. Occasionally, in young individuals an acute nephritis will be observed in which it may be believed, from the evidence, that serious damage has occurred. In such cases, as time elapses and the disturbed kidney function assumes a progressive character, a rise in the diastolic pressure may occur. Under such conditions it may be natural to assume that the cause of the hypertension had its origin as a result of the nephritis. Such a course of events does not, however, occur in the majority of cases manifesting hypertension as a symptom.

5. Nephritis may co-exist or may have resulted from causes which have operated to produce the vascular disease with associated hypertension as a symptom, in the same manner that albuminuria and polyuria may be symptoms.

6. The balance of evidence points to the fact that every patient who has persistent hypertension has suffered more or less renal damage. The extent of the damage may be difficult to estimate, but from a clinical standpoint and its influence upon treatment, such damage may be believed to exist.

7. It has been believed by many investigators that hypertension of itself could not produce arteriosclerosis. That is, given normal vessel walls, it has been believed that other factors were necessary to produce the arterial changes. It has been believed from all the evidence that vessel walls of poor hereditary stock may develop, as the result of a variety of toxins, varying degrees of rigidity and contraction which interfere seriously with the function of a variety of organs; namely, the heart, kidneys, and cerebrum.

8. While it is true that different individuals may possess different degrees of stock in their arterial walls it is also apparent that the care given the stock they possess may be responsible for the length of time it endures for the performance of normal function.

From a practical standpoint and at the risk of empiricism it has appeared best, until more definite knowledge is available, to regard the symptom-complex of hypertension with its associated cardiac, renal, and cerebral symptoms, as part of the manifestations of generalized vascular disease. Such a view has seemed to possess the definite advantage of simplicity, while it serves to eliminate academic

* Presented to the Section on Medicine at the Fifty-second Annual Session of the California Medical Association.

discussion which has not, so far, clarified the situation. With the idea in mind that there may exist varying phases of the same malady it has seemed unnecessary to use the term "primary or essential hypertension." This term lays stress upon and magnifies the hypertensive element of the disturbance, a state of affairs no more warranted than the use of any other symptom at one time or another present during the course of a progressive disease.

THE CARDIAC TYPE OF HYPERTENSIVE VASCULAR DISEASE

Patients who fall into this group manifest the following symptoms:

1. Evidence of vascular changes involving the peripheral arteries. These changes refer particularly to rigidity, but without evidence of contraction of the arterioles.

2. The systolic pressure may be high if the heart muscle is compensating for the added work made necessary in the endeavor to maintain circulatory equilibrium because of rigid inelastic vessels. The diastolic pressure will usually be found to be within normal limits since the lumen of the vessels is not contracted. *The usual pressure ratios will be found to be within the following range: Systolic pressure, 180-200; diastolic pressure, 80-100.* The distinctive feature of this group will be found to be the comparatively low diastolic pressure with an increased systolic pressure.

3. Practically all patients of this group will show cardiac hypertrophy. This has not resulted from peripheral resistance, as measured by the degree of contraction of the vessels, but apparently because of associated changes necessitating increased heart work, such as sclerotic damaged valves, sclerosis of the aortic arch, or as a result of extra-cardiac factors, such as liver cirrhosis, gout, syphilis, or the toxins of a variety of infectious processes which have had direct deleterious effects upon the blood-vessel walls. Prolonged hard physical labor deserves consideration in this connection.

4. The patients of this group do not commonly show symptoms of nephritis, such as nocturia, fixation of specific gravity toward the lower levels, or blood nitrogen retention, especially of creatinin. When albumin and casts are found they have resulted, as a rule, either from stasis due to heart muscle weakness or to vessel changes involving the kidneys; that is, arteriosclerotic changes rather than a true nephritis in the pathological sense of the term.

5. When death occurs among the patients of this group the symptoms and autopsy findings point to gradual or sudden failure of the heart muscle. The systolic pressure may remain high until the heart muscle begins to fail and then falls rapidly as the muscle tone diminishes (the so-called primary high-secondary low sequence).

6. Since the increased systolic pressure may be regarded as a compensatory effort on the part of the myocardium to supply adequately the periphery with blood, treatment should be directed toward maintaining the heart muscle tone. There still exists in the minds of many physicians a digitalis-phobia, due to the teachings of earlier text-books,

with the result that this valuable remedy is withheld from many patients because of the fear of increasing the blood pressure. Large doses, as given in young individuals for the relief of more acute conditions, should not be used, but, since the purpose in administering any drug is to secure the effect desired, the dosage of digitalis should correspond with the urgency of symptoms. In such a condition as an acute edema of the lungs large doses of a suitable preparation administered subcutaneously, intramuscularly, or intravenously will be necessary to save life. In such an acute condition of heart muscle failure the *intravenous* administration of caffein sodio-benzoate, grains two and one-half, should also be used. Nitroglycerin or other vaso-dilating drugs are rarely indicated, because, according to our present understanding of the physics of the circulation, it should be our aim to assist in maintaining an adequate blood supply to the periphery, which includes the cardiac and respiratory centers in the medulla. In other words, the attempt should be made to sustain the systolic pressure rather than lower it.

7. In general, aside from specific indications noted above, the hygiene of proper living as applied to such patients should receive proper consideration. This refers particularly to food regulation, especially if obesity exists, and the attempted control of this disturbance of metabolism. This will many times involve consideration of a possible hypothyroid state and the determination of the basal metabolic rate. The possibility of hypothyroidism in such patients has not generally been appreciated. The American Actuarial Tables have amply demonstrated the serious influence of obesity upon individuals with disturbed heart function associated with hypertension, since a relatively large percentage of deaths among such individuals occur from so-called heart failure. Many such patients have been excessive users of starch foods. For individuals manifesting anxiety and restlessness with disturbed sleep, mild sedatives are indicated.

THE CEREBRO-RENAL TYPE OF HYPERTENSIVE VASCULAR DISEASE

The patients who fall into this group manifest the following symptoms:

1. A high diastolic pressure as evidence of the contraction of the peripheral vessels. If the heart muscle is compensating for the increased peripheral resistance, the systolic pressure will also be found to be increased. *The usual pressure ratios under such conditions will be found to be within the range—systolic pressure, 180-240; diastolic pressure, 120-150.*

2. Definite evidences of disturbed kidney function or nephritis exist in the majority of patients of this group. Nocturia will usually be found to be present, with a tendency toward fixation of specific gravity toward the lower levels. Periodically, albumin and casts may be found in urine specimens. With disturbed kidney function, there will be difficulty in excreting solids and the tendency to abnormal retention of nitrogen in the blood may be marked. This refers particularly, in the earlier stages of the disease, to uric acid and sugar reten-

tion, and in the later stages to abnormal creatinin retention. The abnormal retention of these substances in the blood surely cannot be regarded as a physiologic condition. While it may be granted "no definite proof exists that a low protein diet is effective in lowering blood pressure or a high protein diet in raising it,"¹ the fact remains that when disturbance of kidney function has occurred, as part of the disease process, many patients are benefited by a dietary regime, based upon their metabolic requirements, which takes into consideration a lowered protein and purin intake. In other words, while it may be true that a high protein diet may not be responsible for the development of hypertension *per se*, there can be little doubt that such a diet would be unwise for patients who have developed disturbed kidney function or nephritis as part of their vascular disease. It all depends upon whether the point of view leads one to treat the patient's disturbed physiology or whether one is content to treat the hypertension which, after all, should be regarded as a symptom of the vascular disease.

3. Since evidences of disturbed kidney function exist in a majority of the patients of this group, blood chemistry studies repeated often enough to enable one to judge the extent of disturbed metabolism are of great assistance.

4. In the majority of patients of this group, cardiac hypertrophy will be found. Cardiac symptoms are many times prominent features of this condition, but it has been my experience that a relatively small percentage (10 per cent) of such patients die from the cardiac disability itself.

5. The greatest danger to patients with contracted vessels and high diastolic pressure has, in my experience, occurred from cerebral thrombosis, hemorrhage, or edema frequently designated uremia.

6. On the other hand, despite the evidence of kidney dysfunction or nephritis, anuria has been a relatively uncommon occurrence among patients of this group. The cerebral danger has appeared to be much greater.

7. Whether the cardiac or the cerebral danger is the greater may depend to a large degree upon the localization of vascular weakness. In one patient the cerebral vessels may be less able to stand strain than the coronary vessels.

8. The treatment of patients who manifest symptoms of the cerebro-renal type of hypertensive vascular disease may be so planned as to take into consideration:

a. The correction of disturbed physiology so far as possible by diet, which enables them to live within the functional capacity of their kidneys. This is best secured by a so-called basic-alkali diet²

with moderate restriction of salt, coffee, and the limitation of tobacco. Under this heading should be included investigation into possible endocrine disturbances, which include determinations of the basal metabolic rate and the consideration of possible pituitary and, at the time of the climacteric, ovarian dysfunction.

b. The regulation of the lives of these patients should be so planned that rest and freedom from worry can be secured if possible. The physician will render a very distinct service if it is possible to secure realization of the fact that former capacities for work should many times be limited. The advice so frequently given to retire from business is particularly unfortunate in many instances, for many such patients may live long lives of continued usefulness if they can be made to realize certain limitations. The best advice for such patients is to continue with their work and play, but to be moderate in all things.

c. Adequate bowel elimination, which is best secured by simple saline laxatives, such as sodium phosphate or magnesium sulphate.

d. Hydrotherapeutic measures, such as the cabinet bath, to secure elimination through the skin once or twice weekly. Such measures should be carefully controlled and not overdone.

e. The use of vasodilators for the relief of cardiac and cerebral symptoms, such as anginoid pains or pressure headaches. Benzyl benzoate has been found of value in the prevention of attacks of angina pectoris or cerebral crises. It should be administered for a long period of time.

f. The use of digitalis is many times indicated for its effect upon the heart muscle when its function is disturbed as a result of overwork due to the increased peripheral resistance (high diastolic pressure). The cerebral symptoms, many times present under such conditions, are the results of heart muscle weakness and inadequate supply to the medullary centers. The fear that the use of digitalis will increase the blood pressure is not founded upon clinical fact or experience. It is to be regretted that more physicians have not realized the value of this remedy when heart muscle weakness develops as an incident in hypertensive vascular disease.

g. Venesection may be of value, especially in plethoric, obese individuals, for the relief of acute symptoms, such as an acute edema of the lungs or right heart dilatation which has resulted from persistent cough incident to the bronchitis of elderly people, or for the relief of cerebral vascular crises.

h. Although much of the present-day radicalism regarding the elimination of chronic foci of infection in tonsils or about teeth may be followed by more conservatism, it must be conceded that it should be the endeavor of the physician to eradicate foci in these or other localities whenever it can be done *without undue risk*. It is impossible to evaluate correctly the results so far obtained as regards life expectancy for such patients.

i. Not the least of the duties of the physician should be concerned with the attempt to allay the fear which many patients with hypertension possess. It has come to pass that nearly every bathhouse

¹ Quotation from Editorial Discussion, J. A. M. A., 1923 (April 7), LXXX, 1004.

² **Basic-alkali foods** are those in which there is excess of base or alkali over acid. The following foods are so classed as based upon the ash analysis of Sherman and Gettler and have been tested on man by Blatherwick. **Fruits:** Raisins, muskmelons, dried pears, oranges, currants, bananas, lemons, peaches and apples. **Vegetables:** Lima beans, dried beans, beets, carrots, celery, lettuce, potatoes, cauliflower, cabbage, radishes, turnips, asparagus. **Nuts:** Almonds and chestnuts. **Miscellaneous:** Cow's milk.

The following are classed as **neutral foods** and may be freely used by the patient: Sugar, cornstarch, tapioca, lard, cream and butter.

attendant or cultist of mediocre education has a blood pressure apparatus, the use of which may be believed to exist not so much because of knowledge enabling the user to judge of the problem, but rather because of a desire to appear interested. So far as that is concerned, I can see no valid reason why the use of a blood pressure apparatus should not be permissible just as it is permissible to use a clinical thermometer. The use of both may indicate progress, but after all it is proper interpretation in the use of either instrument that counts. Patients should be made to realize that physicians are coming to a better understanding of the problem, and that they are gradually getting away from the bugaboo of high blood pressure as an entity. May the day soon pass when patients are told that their blood pressures are high, and may they be made to believe that the hypertension phase of their malady is no more important than other aspects of a generalized disturbance not perhaps apparent to them.

(Security Building.)

DISCUSSION

George E. Ebright, 209 Post Street, San Francisco

—Dr. Stone is to be congratulated upon the concise and scholarly presentation of a subject, the importance of which is measured by the tremendous number of people suffering from the condition of which he treats. Vascular disease associated with hypertension might seem to be, in a figurative sense, the bodyguard of the Great Reaper which is thrown into the fray against human life after the front line division of infectious diseases, preventable diseases and other accidents had failed of their object during the youth and middle life of the army of human individuals. That the attack upon the integrity of the vascular system is a thing the brunt of which is borne by pre-senile and senile individuals. That therefore, hypertensive vascular disease and senility are in more than a restricted sense synonymous.

Dr. Stone observes it has not been proven that arteriosclerosis is the cause of hypertension. He could go farther and say that hypertension precedes arteriosclerosis in most cases and that the factors which produce hypertension plus the increased load upon the arteries and the heart of heightened blood pressure have as their result deteriorated vessels. The interesting point is the question of the original cause of hypertension, and it must be confessed that our present state of knowledge upon the subject does not permit a complete answer to the question. A few points, however, are of interest. During the examination of recruits in the draft of the army during the recent war it was observed that men apparently healthy under the age of thirty presented themselves with high blood pressure. Inasmuch as these men had been called from their usual activities and occupations to embark upon a long and hazardous expedition, it was natural that their departure should be attended with unusual feasting and general overtaxing of the alimentary function. The examining surgeons soon learned that a dose of salts and an abstemious diet promptly resulted in the re-establishment of normal blood pressure. It is repeatedly observed, moreover, that men of great mental activity and responsibility and of sedentary habits present high blood pressure long before there is deterioration of either blood vessels, heart or kidneys, and that regulation of their lives, in which attention is paid to proper recreation and lightening of the work of the digestive tract, results in correcting the vascular tension. I have often seen an association between prolonged mental worry and hypertension. Very possibly the link between the two consists of derangement of the digestive function upon the basis of nervous influences. It is

interesting also to observe that many such people with essential hypertension present an increased basal metabolic rate. Enough evidence is before us, I believe, to emphasize the fact that a consideration of the function of the digestive system deserves attention in contemplating the various causes of vascular hypertension, and that vascular hypertension must be considered always as a menace to the integrity of the blood vessels, heart and kidneys.

Dr. Stone (closing)—While it is probably true, as Dr. Ebright has stated, that hypertension may precede arteriosclerosis in some instances, it should be emphasized that arterial rigidity is a natural sequence of the passage of time for every individual. The vast majority of individuals who reach the age of 60 years have undoubted arterial rigidity, and yet many of them do not have hypertonus. In other words, a condition rather than a disease is present.

Hypertonus only occurs, according to my conception, when the smaller arteries are contracted. They may also be rigid and definite arteriosclerosis exist, but the essential thing is that their lumen is contracted. This indicates a pathologic state rather than a condition associated with advancing years.

It is of importance, clinically, to differentiate these two types, for not only is the treatment dependent upon an understanding of the basic disturbance, but the prognosis as well.

Some Problems of Medical Journalism—Colorado Medicine publishes a very interesting article entitled, "Editing the Journal." In this article attention is called to the amount of work, initiative and system required in producing the ordinary medical journal. This is followed through from the selection of material, known as copy, which is to be edited, oftentimes rewritten, the preparation of editorial matter which the editor must either extract from his own brain or extract from the brains of obliging conferees, the procuring of news items gathered from all quarters of the State and in a variety of ways, the correction of galley proof, arranging of material into form proofs, making up the index, and last but not least, getting the journal addressed and into the mails so that everyone entitled to the current number will receive it. This does not include the procuring of advertising, arranging it in the proper form, and elimination of advertising that is objectionable in the advertising copy.

Any State journal can be made better if the editor has the assistance and co-operation of the profession. Contributors can make it easier if they will take the trouble to have their articles not only typewritten but carefully edited as to grammatical construction, paragraphing, punctuation, and attention to clarity and conciseness of expression. Secretaries of county medical societies can help the Journal as well as their organizations if they will furnish condensed reports of the meetings of their respective organizations, together with abstracts of the more important papers. News notices, especially those relating to deaths, marriages, removals, and other occurrences of especial interest to the physicians of the State, must be obtained through officers of medical societies, individuals, or from the more uncertain news clipping bureaus. If these items could be sent in by those who are most familiar with them, it would add to the completeness of the Journal. Finally, the editor needs helpful assistance from those who can render it, and at all times he welcomes constructive criticism and suggestions to aid him in betterment of his work. It is presumed that the editor of each medical journal tries to produce a periodical which is a credit to him as well as to the association which he represents, and he will do his best when he knows that he has the encouragement and co-operation of the entire medical association, for that stimulates him to his best efforts.—(Editorial, Journal Indiana Medical Association.)

DIET ADJUSTMENT AND INSULIN THERAPY IN DIABETES MELLITUS*

By ERNEST S. du BRAY, M. D., San Francisco
(From the Department of Medicine in the University of
California Medical School.)

I. *Introduction*—In a subject of such magnitude, as expressed by the title of this paper, it will be possible to present only those principles which appear of first importance in the management of uncomplicated diabetes. In spite of the discovery of the pancreatic extract, insulin, all authorities agree that diet adjustment must remain the basis of diabetic management.

For a long time, diabetes has been generally regarded as the most inadequately treated systemic disease in medicine. This has resulted largely from the failure of some physicians to master a few fundamental principles of dietetics, without which successful treatment is impossible. However, with the introduction of insulin, it has become even more incumbent upon them to plan and control, by exact quantitative methods, the total dietary regime of the patient.

II. *Diet Adjustment*—Diet adjustment implies primarily the preparation of a diet with the proper balance of protein, fat, and carbohydrates, and at the same time with a known food value in calories, which will be sufficient to answer the wear and tear and the energy requirements of the particular individual.

The brilliant contribution of Woodyatt, in 1921, has revolutionized our method of diet adjustment. Woodyatt showed that three-fifths of the protein, one-tenth of the fat, plus the total carbohydrates of any diet, is burned in the organism as glucose. This was a radical deviation from our former ideas as to what composed the available glucose of the diet.

The second fundamental principle he advanced dealt with the relation of the amount of fatty acid in the diet, to the amount of glucose; in other words, he showed that a diet in which the total fatty acid in grams is not more than one and five-tenths times the total available glucose in grams will be found safe and advantageous in most cases. This conception he expressed by the formula: The total fat of the diet should not exceed twice the carbohydrate plus one-half the protein.

With these two fundamental principles in mind, the ratio of the three components, P, F, and C, can be readily determined and the diabetic assured of a safe or balanced diet. From the Aub-Dubois calculations, it can be estimated that an adult with average nutrition will utilize, in twenty-four hours, approximately thirty calories per kilo of body weight. This necessary fuel must be obtained from the P, F, and C in the food, or from the body tissues. One gram of C or P will yield four calories, and one gram of F, nine calories. In the animal economy, a certain amount of P is absolutely essential for growth and to replace nitrogenous waste. This amount is usually estimated to be from .7 to 1.0 gram per kilo of body weight in

the adult, and a somewhat higher figure in infancy and childhood. With these figures as a basis for calculation, the proper caloric value of diets in diabetes are readily determined.

III. *Objects of Treatment*—Before proceeding further, it may be well to recall the objects of treatment in diabetes. These can be grouped under three heads:

1. The maintenance of body weight, strength, and efficiency. This I consider the prime object of treatment. Formerly this was difficult to attain by our undernutrition methods, because when the diet was increased above a certain point, the disease showed rapid progression and when it was decreased, the patient lost strength and efficiency.

2. The maintenance of a urine sugar-free and a normal blood sugar-level. This I believe is of extreme importance, and although some authorities are inclined to put less weight on these laboratory data, particularly since the advent of insulin, I feel that all experience with the management of diabetes points to the value of a urine sugar-free and the maintenance of a normal blood-sugar level.

3. The prevention of acidosis. Ketonuria has always been the danger signal in diabetes, and it goes without saying it remains the one thing above all others to prevent. Besides the abnormal metabolism of glucose, diabetes is characterized by a defective metabolism of fat. "Fats burn in the flame of the carbohydrates," and so, with a marked reduction in the burning of carbohydrates, the fat metabolism is upset. Fat is incompletely burned, with the result of an accumulation in the blood and tissues of fatty acids, such as diacetic acid and acetone. These so-called ketone bodies may be derived from the protein as well as the fat, but to a lesser degree; the former yielding in terms of fatty acid a possible 46 per cent by weight, and the latter 90 per cent. The point of all this is, that these ketogenic components of the diet must, therefore, be balanced by the anti-ketogenic glucose, which is produced not only from the carbohydrate food, but also in smaller amounts from the proteins and fats according to the first principle of Woodyatt, referred to above. This is roughly the chemical mechanism of the production of acidosis in diabetes. To discuss the entire subject of acidosis and its management, at this point, would take me too far afield. However, it will be referred to later when dealing with the use of insulin.

IV. *The Use of Insulin*—So much for diet adjustment and the objects of treatment in diabetes.

Insulin is the active principle derived from the Islands of Langerhans of the pancreas. The story of its brilliant discovery by Banting and Best at the University of Toronto needs no repetition here. The commercial product of this substance, now in use, is manufactured by the Eli Lilly Company of Indianapolis, and is called Iletin. It is supplied to the profession in small glass vials in two strengths, designated as H-10 and H-20, and can be used effectively only by the subcutaneous and the intravenous routes.

In my work, all patients presenting themselves for treatment are hospitalized for a preliminary

* Read at the Annual Session of the Nevada State Medical Association, September 29, 1923.

study, which requires from four to six weeks. The object of hospitalization is twofold: First, to determine accurately the severity of the case and establish the level of the natural glucose tolerance; and second, to educate the patient in the use of quantitative diets and the use of insulin, if it is found that this is required.

The actual procedure I have found useful for the great majority of uncomplicated cases is somewhat as follows: The first thing to be determined is the patient's natural tolerance for glucose; in other words, the amount of glucose that the individual can burn per twenty-four hours, without the artificial aid of insulin. On admission to the hospital, the patient is weighed and put to bed. The daily twenty-four-hour urine specimens are collected and tested qualitatively for the presence of sugar and ketone bodies, and the quantitative amount of glucose in the urine is also determined. A blood sample is collected each morning before breakfast to determine the fasting blood-sugar level.

The first test diet I use in most instances contains a glucose value of 100 grams, in which the relative amounts of P, F, and C are determined by the Woodyatt formulae, referred to above. For instance, in a sixty kilogram patient, the P content of this diet would be placed at 60 grams (i. e., allowing a gram of P per kilo of body weight, as is necessary for basal requirements); the F equals 130, and the C equals fifty. This diet supplies a caloric value of 1610 calories, which would be slightly under the calculated basal requirement of 1800 calories for a sixty kilogram individual. The patient is then observed on this diet for several days, and if he becomes sugar-free and the blood-sugar shows a tendency to fall to the normal level, the diet temporarily remains unchanged. If this status of conditions persists for a week or ten days, it is apparent that the patient has a natural tolerance of 100 grams of glucose or more. Additions to the diet are then cautiously made. Ten to 15 grams of both F and C are added, the protein remaining unchanged. Sooner or later, as these additions are made and the glucose value of the diet rises, the point is reached at which the urine shows sugar and the blood-sugar tends to rise. Just below this point, we may say, for practical purposes, lies the patient's natural glucose tolerance.

On the other hand, it is frequently found that the urine and blood-sugar level will not become normal on a diet containing 100 grams of glucose. In such cases, the diet is gradually reduced in its glucose value by reductions in the F and C components until the level is reached at which the urine and blood becomes normal. If the glucose tolerance is very low, i. e., anything less than 35 grams, as a rule, nothing is gained by prolonging the under-nutrition period, and valuable time is lost in doing so. In such a case, it is apparent that the use of insulin is indicated to make up the difference between the low natural tolerance and a proposed diet which will be adequate for the individual, in order for him to attain the three objects of treatment, namely, to maintain bodily vigor and efficiency; to maintain a normal urine and blood, and to prevent the progression of the disease, with acido-

sis constantly threatening. The decision to use insulin made, it is necessary to raise the diet at once to a glucose value of 75 to 100 grams. This will protect the patient from the so-called hypoglycemic reaction caused by a subnormal blood-sugar following the administration of insulin. I shall have more to say concerning these reactions and their prevention a little later. The initial dose of insulin should be small, preferably five units, either twice or three times a day, about half an hour before meals. Following the administration of insulin, the same close observation of the urine and blood-sugar level are important. In the course of observation, the urinary sugar usually disappears before the blood-sugar level comes to normal. As the insulin dosage is raised from fifteen units a day to twenty, twenty-five, and so on, eventually the patient becomes sugar-free, and following this the blood-sugar falls slowly to normal. Again the diet is increased by 20 grams in its glucose value. With increased diet an increased insulin dosage is required. When the point is reached at which the diet is adequate and the insulin dosage sufficient to just keep the patient sugar-free and his blood-sugar normal, the balance is struck for the individual under basal conditions. It is necessary now to get the patient out of bed as soon as possible and resume his normal activity. The energy requirements of the ambulant patient are increased from 40 to 50 per cent, so the diet must be raised to meet these needs. It is frequently found that the rest in bed on a low caloric diet, plus the assistance which the insulin offers in relieving the strain on an overworked pancreas, brings about an apparent gain in natural tolerance within a few weeks. With increased tolerance, the insulin dosage must be gradually reduced.

The amount of glucose which one unit of insulin will burn varies with individual cases. In the severe cases with low tolerance it appears to be from 1 to 2 grams, whereas in the milder cases, one unit will take care of 3 to 4 grams of glucose.

The foregoing exposition of the manner of determining the insulin dosage in a particular case is only one of the many methods which can be utilized. It is, however, the method of greatest simplicity and the one I have found most useful in the greatest number of cases.

V. *What Cases Shall Receive Insulin*—In the early days of insulin therapy, I was inclined to feel that only exceptional cases would need insulin. In looking over my clinical material in the University of California Metabolic Division of the out-patient department, I found numerous cases that had apparently done well for several years on low caloric diets. However, as our experience with insulin has accumulated, it becomes clear that its use will be gradually wider and wider. Probably the largest group of cases that require insulin are those in which small doses daily, say from ten to twenty units, are sufficient. In consideration of this experience, I have now reversed my opinion and believe it is the exceptional case of diabetes that would not be better off with insulin than without it. I do not believe that many diabetics are so mild that they can constantly manage a properly balanced 2000 to 2500 calorie diet without showing urinary sugar.

and if this is true, it would appear that most diabetics need insulin if they hope to lead anything like a normal life and maintain anything like a normal metabolism.

VI. *Overdosage With Insulin—The Hypoglycemic Reaction*—Overdosage with insulin produces a lowering of the blood-sugar to subnormal levels, and is accompanied by a fairly well-defined symptom-complex. The patient notices a general sense of weakness, trembling, drowsiness, and hunger which comes on usually from one to two hours after the administration of the insulin. Slight overdosage may occur at any time during the use of the drug, but it is not attended with serious results. If it recurs frequently, it is direct evidence that the dosage is too high or the diet insufficient.

This hypoglycemic reaction is promptly and readily overcome by the immediate administration of a glass of orange juice containing 10 to 15 grams of glucose or 20 grams of milk chocolate.

Patients who are to receive insulin are always instructed in this method of controlling this condition at the outset of treatment, and to the present time, I have not seen nor read of any serious accidents from overdosage.

VII. *Hospital Instruction and Home Treatment*—During the period of hospitalization, the patient is given systematic instructions in planning quantitative diets, in the use of insulin, with particular reference to dosage and the care and use of the hypodermic syringe, and in the performance of the Benedict's test for the presence of sugar in the urine.

By means of a special diet card the instructions in dietetics are greatly simplified and readily mastered.

The home management of patients, after the preliminary hospitalization, has been entirely satisfactory. The patient examines his urine each day; he plans and follows a carefully prepared dietetic regime of known food value, and he takes his insulin in the proper dosage as was determined for him in the hospital. The cases that I have followed under these conditions have been attended with pleasing and satisfactory results.

Frederick Allen is still of the opinion that slight undernutrition is the ideal state for the diabetic to maintain even with the use of insulin. I am of the same opinion, and accordingly I warn my patients to prevent overweight and adjust their final diets which they are to follow at home, with this in mind.

VIII. *Acidosis*—The problem of acidosis is a big one, and I hesitate to enter into its discussion. Its extreme importance, however, compels me to present briefly the general plan of management of this condition I have adopted since using insulin.

Clinically, acidosis is characterized by drowsiness, deep and rapid breathing, nausea, and often vomiting. The clinical picture is confirmed by certain laboratory findings, such as acetone bodies in the urine and a lowering of the carbon dioxide combining power of the blood plasma. All degrees of acidosis occur depending on the amount of acetone bodies in the blood and tissues; however, its

presence in any degree must be regarded as a serious affair.

Impending acidosis requires the withdrawal of all food except the C represented in the juice of citrus fruits. A pint to a quart of orange juice should be given each twenty-four hours. Besides this other fluids should be forced, and between five and ten quarts of water should be taken in this period. Where oral administration of fluids is not possible, saline solution by rectum, or subcutaneously, should be utilized. An enema should be given at the start and repeated daily if necessary. The use of sodium bicarbonate still has a place in this condition. The amount to be used will vary in individual cases between 5 and 50 grams per twenty-four hours, by mouth or rectum.

Finally, the presence of acidosis, in any extent, indicates the prompt use of insulin. As a rule, thirty to forty units of insulin should be given intravenously and twenty to thirty units subcutaneously from the start. A blood sample is taken for the determination of the blood-sugar and the carbon dioxide combining power of the blood plasma. The urine is also followed closely for the presence of sugar and acetone bodies. Subsequent insulin injections should be made every hour or two hours, the dosage depending on the clinical condition of the patient and the laboratory findings. If the blood-sugar remains well above normal and sugar is still coming through in the urine, high dosage of insulin (thirty to forty units) is still required. The subsequent doses of insulin, however, should be accompanied by the administration of glucose, either dilute glucose syrup or orange juice with sugar, so that for each unit of insulin given, one gram of sugar is given. The purpose of the glucose is to safeguard against a severe hypoglycemic reaction as the blood-sugar falls, and further, to combat the acidosis itself. The more sugar given, the more that will be utilized with a fixed amount of insulin. The utilization of glucose is also essential for the combustion of the accumulated acetone bodies and glucose also has a desirable diuretic effect. If the patient can retain nothing by mouth, the glucose can be given in a 5 per cent saline solution by rectum, intravenously or intraperitoneally.

As acidosis decreases, the insulin dosage required is reduced and the intervals between doses lengthened. The food during this preliminary period is solely the C of the orange juice. Following the disappearance of the acidosis, the diet can be gradually increased to include some P, more C, and finally, a small amount of F. Subsequently, the diet and the insulin dosage can be balanced in the usual way.

This, in a general way, represents the method of treatment in acidosis. For patients first seen in deep coma, the above plan is followed except more intensively and with higher insulin dosage.

IX. *Conclusions*—Our experience leaves no doubt that the pancreatic extract, insulin, is a valuable therapeutic agent. This is measured objectively in terms of lowered blood-sugar values, decreased glycosuria, and in the control of ketosis, as well as in the relief of symptoms.

There is a striking variation in the extent of the

response to therapy with insulin in individual cases. This is accounted for in several ways, complicating infections and difference in severity of the diabetes, appear to be the chief factors.

The effects of insulin can be quantitatively measured in a given case by a careful balancing of a measured diet against a measured dose of the drug. One method of obtaining the proper dosage of insulin is presented above, but no hard-and-fast rule of procedure should be followed blindly in all cases. One must study each case intelligently not only to determine the dosage required to enable the patient to ingest enough food to carry out the normal activities of life, but the division of doses and time relationship between meals needs to be worked out in order to avoid annoying and probably harmful periods of hypoglycemia.

We are only in the beginning of our knowledge concerning the therapeutic use of insulin and undoubtedly, as time passes and experience accumulates, much valuable information, which we now lack, will be forthcoming.

(1251 Flood Building.)

Community's Right to Enforce Physical Fitness—

If ignorance and quackery on the part of those who undertake to treat my sick fellow-citizen endanger his health, and thus make him less capable, or incapable, of bearing those economic and military burdens that actually or potentially are his, then I as a member of the body politic, in order that his burdens may not be thrust on me, have the right to see that he is not exposed to ignorance or quackery. For I must pay taxes to support and care for my fellow-citizen, when he is disabled by disease, and I, therefore, am entitled to see that he does not recklessly or ignorantly endanger his health. The soundness of this principle is universally conceded in laws prohibiting bad food and impure drugs, unwholesome dwellings, and insanitary working conditions. No one clamors for the right of every citizen to buy bad food for himself and his family, to live in unwholesome quarters, and to work under insanitary conditions. With respect to these matters, the claim that each citizen's health is his own, to do with as he likes, seems to have no place. What basis is there, then, for the claim that he, when sick, has the right to retard, and it may be to prevent, his restoration to health, by employing incompetent practitioners? My interest in the health of my neighbor is not limited, however, by economic considerations. In case of war, riot or insurrection, I, in common with my able-bodied fellow-citizens, may be impressed into service to defend the common welfare, even at the risk of my life, and I am entitled, on that account, to see that my share in the burden and risk of defense is not increased by the fact that a fellow-citizen who should share them with me has unnecessarily incapacitated himself for such duty, either through the employment of dishonest or incompetent practitioners, or otherwise. Finally, I think I may justly claim the right to see that my fellow-citizen does not, through the employment of incompetent practitioners, expose me and my family to infection, or thrust upon the community an epidemic, in the cost of which I, as a taxpayer, may have to share. I, then, and through the Government and for the common weal, have a right to have incompetent practitioners barred, no matter how much my ignorant neighbor may be willing to endure or encourage them.—William C. Woodward, M. D., *Federation Bulletin*, September, 1923.

DEMONSTRATING THE TUBERCLE BACILLUS*

By ERNST A. VICTORS, M. D., San Francisco

The tubercle bacillus holds a rather unique position in bacteriology in that its identification, based upon morphologic characteristics alone, is usually sufficient for the diagnosis of a tuberculous process. A biologic diagnosis, owing usually to the time factor, is infrequently disregarded and is generally limited in its application to such specimens in which the organism has evaded microscopic detection. In fact, the diagnosis of tuberculosis must be viewed as presumptive, unless corroborated by positive laboratory findings.

This paper ventures no originality in technical procedure, but is rather a summary of the result of several years' experience in selecting published methods, with individual modifications, with a view to advancing laboratory efficiency and to minimize, without sacrifice of precision, the time of investigation. I think it is safe to assume that, with the commonest tuberculous involvements, pulmonary and renal, by the time the individual reaches a condition of ill health for which he consults a physician, the tuberculosis is "open." Tubercle bacilli are present continually or continuously in the exudate or secretion. This belief carries with it the importance of intensive investigation in suspected cases—re-examinations and protracted material collections, and lends comfort to an ultimate negative conclusion.

CONCENTRATION

Homogenization and fluidification of denser material—sputum, pus, feces, and tissues—preceding depositing for smear preparations is now a well-established laboratory procedure. Many methods are in use, each claiming its group of adherents. We have been inclined to discard methods involving the use of ligroin, chloroform and other immiscible fluids of unequal density for bacterial layering as having no advantage over simple liquefaction by weak sodium hydrate or chlorine solutions and reduction of density with distilled water or alcohol and rapid centrifugalization. Liquefaction by autolysis or pressure steam is not practicable.

One present technic of concentration is to add to the entire specimen submitted, generally in the container in which the specimen is received, a sufficient amount of Lorenz solution to render it semi-liquid, so that an average fraction can be obtained. Small specimens, less than 10 to 20 cm., are used entire. Tissue and curettings are first pulped with sand.

A portion of such partially homogenized specimen—about 15 cm.—is transferred to a heavy glass rubber stoppered bottle, 30 by 100 cm., having no neck. Lorenz solution is again added, in sufficient amount to immediately complete homogenization, aided by vigorous hand-shaking. The bottle is then partially filled with distilled water to reduce density, again agitated and a portion transferred to a 15 cm. centrifuge tube and rapidly spun for twenty minutes.

Lorenz solution is a substitute for Uhlenhuth's

* Presented to the Section on Pathology and Bacteriology at the Fifty-second Annual Session of the California Medical Association, San Francisco, June, 1923.

alkali hypochlorite (antiformin) solution and is a simple calcium chloride—sodium carbonate solution without caustic soda. It is simple to prepare, is more active than antiformin, and is equally resisted by the tubercle bacillus.

Fluid specimens—cerebro-spinal fluid and urine—by their volume render simple centrifugalization a tedious process. The frequency with which direct microscopic examinations are negative in these specimens, but from which the pig tests are positive, is at best disquieting to the laboratorian. One can but conclude that sedimentation methods are incomplete or that slide-search has not been thorough. A trace of egg-albumin fixative added to the deposit is an essential guard against loss in slide-washing.

Our method for handling cerebro-spinal fluids, after pipetting off sufficient fluid for cell-counts and after a sufficient time has elapsed for spontaneous fibrin formation, is to collect upon a slide the fibrin web, if formed, with as little disturbance to it as possible. To prevent balling of the web, a portion of the fluid is pipetted off into another clean container, leaving the web with about 3 or 4 cm. of fluid in the original tube. The web is then carefully floated onto a clean slide (a slide can conveniently take 4 cm. of fluid). Now, by carefully pipetting off the fluid from the slide, the web is left stranded undisturbed. All the fluid is now centrifuged under high speed, and the deposit, to which has been added a loop of egg-albumin, is transferred to the web-slide, dried, fixed, and stained.

Urine gravitation with large sedimentation glasses followed by centrifugalization of the dependent portion has not been overly successful with us, nor have we found the addition of coagulants advisable on account of obscuring the field. Although somewhat tedious, the best method at our disposal is an initial centrifugalization in large (50 cm.) tubes with recentrifugalization of the dependent portions in smaller tubes.

STAINING METHODS

The classical Ziehl-Neelsen staining method has stood, with but slight modification, for many years. Cresyl violet, and Much's gram method have not replaced carbol-fuchsin in general application. There is no question, however, judging by comparative methods, but that a great number of tubercle bacilli are non-acid-fast types and yield the dye during the acid-alcohol decolorization process. The introduction of sodium sulphite by Konrich as the decolorization agent, although long known as a destroyer of aniline stains, has more than doubled the number of visible tubercle bacilli in the field. With us, certain sputums that have been negative under the old technic have yielded typical fuchsin-stained rods when treated with this decolorant.

Referring again to the carbol-fuchsin stain, we find that a minimum of twenty minutes immersion is essential to complete staining. A longer period is desirable when practicable. Heating the carbol-fuchsin does not hasten or intensify staining.

Since the introduction of sodium sulphite in decolorizing, numerous modifications of Konrich's technic have been put forth. None, in our opinion, is equal in simplicity and result. The choice of

picric acid, malachyte green, Bismark brown, or weak methylene blue, as counter-stain is individual.

One slide only is necessary—but that thoroughly searched. In my laboratory a search of not less than fifteen minutes has been long established as the minimum time before a smear can be negated.

Demonstrating the organism *in situ* in tissue is best effected in thin frozen sections, after formalin hardening. Such sections floated onto egg-albumin slides, fixed with absolute alcohol, are stained by the usual Konrich method, picric acid being used as the counter-stain. Dehydration and clearing is carried on in the usual manner, but as quickly as possible.

CULTURAL METHODS

We have never been able to demonstrate tubercle bacilli in the culture tube inoculated with material that has failed us in microscopic smears. Nor can we claim any pronounced success with culture media methods of isolation with material containing a grossly mixed bacterial flora. We have obviated the drying tendency of Petroff media and of William's and Burdick's modification by moist incubation. The latter media has our preference. Lyall-Griffiths beef-liver-egg infusion media appears to yield no advantage.

Destruction and inhibition of secondaries without decreasing the viability of the tubercle bacillus appears to be more theoretic than real. Glycerin treatment as suggested by Twort has been entirely ineffectual, and gentian violet in 1:2500 dilution is likewise of little value. Digestion with weak sodium hydrate followed by washing with normal salt solution, rather than neutralization, has given better results than antiforminized specimens. We have followed Griffith's antiformin technic carefully, sowing tubes in 1-2, -2-3 and 5-minute intervals with 15 per cent antiformin treated material without better results than with weak caustic soda.

BIOLOGIC METHODS

Although conceded that susceptible animals offer the most suitable medium for differentiation between pathogenic and non-pathogenic acid-fast organisms, and that this medium is the most delicate for the specific demonstration of tuberculous disease, we cannot deny the fact that our commonest inoculable animal, the Guinea pig, occasionally resists implantation of certain strains of human tubercle bacilli. The diagnostic success of Guinea pig inoculations with material suspected of being tuberculous depends obviously upon animal susceptibility plus the number and virulence of the injected organisms. All three elements of the equation resist arithmetic deduction, owing to individual and unknown variation. Suffice to say that all inoculatory procedures carry with them a certain degree of "negative" uncertainty.

Under the ordinary intraperitoneal injection procedures, the time factor has been an annoying contingency. The four to six weeks interim before conclusions can be reached is not without its embarrassments and has had a deterrent influence upon the general use of so valuable a diagnostic procedure.

Bloch has demonstrated the rapid development of tuberculous adenitis in Guinea pigs after trau-

matizing lymph nodes between the fingers and injecting tuberculous material into the drainage area subcutaneously. Bloch's technic, while not yielding results as diagnostically convincing as does the peritoneal route, nevertheless demonstrates a heightened susceptibility to tuberculosis after disturbance of lymphoid structure.

The lymphocytic defense against the tubercle bacillus is well known; more specific is the wax and fat splitting ferment of Marie and Fleissinger—lympholypase. After massive Roentgen-ray dosage a reduction in the peripheral circulation of both leucocytes and lymphocytes takes place without much alteration in ratio. It is suggested that susceptibility is increased in proportion to the diminution in ferment action similar to the ray influence upon glandular internal secretion.

Morton, in 1916, applying this principle to tuberculosis diagnosis, reported the presence of peritoneal tubercles in eight to ten days in pigs injected with tuberculous urine and which had received an X-ray dose of 50 milliamperes-minutes, using a twelve-inch focal distance and an eight and one-half-inch spark gap. Following reports by other investigators have not been so encouraging. The same technic was generally followed, variation being in the time of exposure. Eckford, using cultures, failed to note encouraging results with one exposure, but with repeated exposures with the same dose, found the lesions both intensified and hastened but still lacking in striking differences. Eckford fails to state what milliamperage his tube is drawing, and his dose is, therefore, not computable. Kellert, with Morton's dose, found this procedure as not replaceable of the usual longer method. Weinberg, using cultures, in a series of three methods of dosage, found no marked difference with Morton's dose, and no difference in the time of death after a double dose at seven days' intervals. He concludes that he is unable to hasten tuberculous lesions after X-rays.

We have X-rayed pigs almost invariably since Morton's report, injecting another pig by the usual method for assurance and control. Seventy-five mam. of ray in broken doses, alternate days for three doses, has been our usual technic. Rarely have we found unmistakable tubercles in ten days or less, but we have never failed to diagnose a tuberculosis in from fifteen to eighteen days. We have never noted nodules in rayed pigs that did not appear in the unrayed pigs in the ultimate autopsy.

We have been interested, too, in the results of injection into the more susceptible abdominal area. Oppenheimer obtained positive and uniform results in fourteen days with intrahepatic injections and with injections into the hepato-splenic area. Miller, likewise, reports diagnostic evidence in twelve to sixteen days after intrahepatic injections. Recently, we are injecting suspect-urines into X-rayed pigs, using the hepato-splenic area and withdrawing the needle while injecting, so that a greater contact can be effected. This procedure appears to be thoroughly reliable for a fourteen-day diagnosis.

As with cultural preparation of thick or mixed bacterial specimens, we prefer washing the deposit with normal salt solution after homogenization

rather than neutralization. We prefer using the deposit from untreated urine showing no evidence of contamination, although we have lost some pigs by so doing. Sterilization with gentian violet is a safe procedure and is indicated when secondaries are a possible hazard.

SAPROPHYTES

Certain acid-fast saprophytes—the smegma and Timothy grass bacilli, elevated to importance by carelessly taken specimens and faulty dairying practices—do not today warrant the differential concern that they formerly did. While the smegma bacillus is a common skin-recess inhabitant of the unclean, the practitioner has grown to realize the necessity of safeguard, and is generally zealous of avoiding saprophyte confusion. Nor am I inclined to demand irrigation and catheterization, and am willing to rest a conclusion upon a voided urine specimen from a well-washed and clean genital. Timothy grass bacillus, formerly a common milk contamination, is even a lesser contender. It may be present in specimens collected in unwashed containers that have been packed in grass.

In case of doubt the biologic method still remains as the only dependable method of differentiation.

CONCLUSIONS

In conclusion I wish to reiterate my belief that most tuberculous processes, with the exception of deep-seated infections, are "open" by the time a physician is consulted and that tubercle bacilli are present in exudate and secretion; that tubercle bacilli are usually demonstrable by our present methods; that "negative" findings from repeated examinations or preferably from total specimens taken over a period of days are of exclusional value; that "negative" biologic tests are not necessarily conclusive; that a "safe" biologic diagnosis can be made in fourteen days; that the presence of typical fuchsin-fast rods in properly taken specimens is sufficient to warrant the diagnosis of tuberculosis.

(133 Geary Street.)

DISCUSSION

H. A. Thompson, Timken Building, San Diego—I consider Victor's paper a careful resumé of modern laboratory methods, while certain variations in technique will be found in every clinical laboratory. I do not entirely agree with the statement that we have an open tuberculosis with elimination of bacilli in all cases by the time a physician is consulted. I think we may have an infiltrating lesion before we get destruction of tissue and are able to say tubercle bacilli are thrown off in the exudate and secretion.

I believe the concentration methods are very important in cases of large quantity or of thick specimens, while I think the solution used is not of such great importance. I have found very satisfactory incubation at 37 degrees for twenty-four to forty-eight hours and the use of equal parts of 15 per cent NaOH and Labarraque's solution. It has been claimed by some workers the bacilli may be increased by incubation. While I think they may be more readily found, I can hardly see how anyone who has grown cultures of this organism could admit that.

I think the technique given for spinal-fluid examinations deserves especial attention and is very valuable.

I was very enthusiastic about Petroff's media and cultivation methods for a time, but after a consider-

able series of cases I was unable to demonstrate the organism in cultures, where smears with the concentration method were negative. It is necessary to keep the air of the incubator saturated with moisture which favors the growth of moulds, which the alkaline solutions do not entirely eliminate. I found the gentian violet egg media very satisfactory for primary cultures, but on account of the overgrowth of moulds they had to be transplanted often, and even then it was sometimes difficult to get satisfactory cultures.

I consider another point well taken in regard to the danger of other acid-fast organisms, especially the smegma bacillus, the import of which I consider exaggerated. The hay and grass bacilli in the ordinary specimen should not be a factor. Of course, this is in ordinary clinical work.

For absolute proof I believe we all agree the only positive identification lies in biologic methods.

Dr. Victors (closing)—I am in thorough agreement with Thompson, in that there is no special choice in concentration methods. We have simply weighed the time factor without loss of precision.

Concerning biologic proof of the organism, I am wishing to emphasize that, in the negative result, the biologic test is not at all times conclusive.

PRESIDENT'S ADDRESS, NEVADA MEDICAL ASSOCIATION*

By JOHN LaRUE ROBINSON, M. D., Reno, Nevada

We are a unit of a national organization, banded together for the purpose of promoting the science and art of medicine, and the betterment of public health. January 1, 1918, this unit had 75 members. July 1, 1923, we had 115 members. Our State has four county societies—Nye, Elko, Churchill, and Washoe. We have 59 Fellowships in the American Medical Association, and 33 subscribers to the *Journal*. Every subscriber should be a Fellow, as the cost is the same. It is, however, necessary for the member in the County and State Society to make regular application for Fellowship, and to pay annual dues. Failure to make such application causes several eligibles to be listed as members only.

California always has contributed liberally to our pleasure and enlightenment, and now the CALIFORNIA STATE JOURNAL OF MEDICINE is our official publication. We have become so closely related to California that we must be interested in her activities and medical policies.

Dr. Wilbur stated in his address at San Francisco that:

"Probably the members of the American Medical Association do the largest amount of charitable work of any voluntary organized body in the world. Up to date much of it has been thoughtlessly done as is the giving of doles to street-corner beggars. The whole problem of charitable and semi-charitable work of the medical profession needs intelligent and modern organization from within the profession. In too many instances we have even lost leadership in our own charitable work. Hit-and-miss individualistic methods, protected by tradition and prejudice, are not in keeping with our forward leadership in science. The social relationships of medicine are so intimate and

imperative that they are bound to multiply and continue. We cannot stop them by calling them Bolshevik or Socialistic or pro-German, but we can guide them if we get away from the brake and begin to steer."

We cannot steer straight as long as individual members will publicly endorse policies in medicine after their own society goes on record as disapproving the same. This practice weakens the profession as a whole, and gives our critics an opportunity to declare that we cannot agree among ourselves. It would appear as though some of our noted specialists have sold their profession for lay popularity. It is not necessary for every physician to agree at all times with his colleague. Honest disagreement is good consultation and should be encouraged, but the consultation should be held at a medical meeting. When members of organized medicine will bring their troubles to the medical association and there abide by the majority, or get out, the sooner the profession will take its place in the world, to the benefit of society.

The recent war has awakened the entire world to the fact that modern medicine is necessary to successful warfare as well as successful civilization, and the professional welfare worker and politician were not slow to recognize this fact. Laymen attended to having lay-medicine endorsed by societies and legislatures, until the busy doctor has lost command of his own business. By natural law and rightful thinking the physician should be the middleman between medicine and the patient. He cannot treat people by mail successfully, or through the press, or delegate his knowledge and skill to another, without seeing the patient. The multiplicity of health propaganda and medical advice being propagated in our own State is a fair example. We are sending out lay medical advisers, paid by the taxpayers' moneys and various contributions made by well-meaning people, and yet we haven't an institution in the State, of which I am aware, where service can be rendered to the ones who need it most. These lay medical advisers have the temerity to advise patients and their children in reference to medical treatment in the most critical periods of their lives.

The doctor always has, and always will care for the sick—rich, poor, and wage-earner; but the time has come when he cannot do it efficiently without sick-beds, surrounded by the proper services and apparatus to allow him to do his best work. Every community needs hospital beds open to the wage-earner who cannot afford the ruling private hospital expenses, and it is up to the people to provide these beds, either through taxation or endowment, and the patients using the beds must not be branded as belonging to any one class, either by the amount of money paid or the type of disease they are suffering from. When the physician directs the patient to the hospital he assumes the responsibility of a careful physical examination, good surgery, and care. How can he do this without having something to say concerning the equipment, management, and policy of the institution? It is the duty of the physician to render whatever service he can to every hospital he can, providing the hospital

* Presented at the Twentieth Annual Session of the Nevada State Medical Association, Reno, September 28, 1923.

is legitimate. This is an economic proposition as well as a humane one, for there can be no social progress without good public health, and when one is left inefficient from lack of proper medical attention, it is charged to the taxpayer, plus the individual misery.

To quote from the American College of Surgeons Bulletin:

"For the past decade, American hospitals have been passing through a state of change. The development of modern surgery and medicine, the advancement in diagnostic procedure, the forward strides of pathology and roentgenology, made severe and confusing demands upon hospitals. In addition medical men, hospital executives, and public health officials began to conceive of the hospital in a new light—that of an institution which makes itself not only the clearing house for treatment, but also the headquarters for community health activities. Some such conception came to the minds of medical men and hospital executives, who were striving to give their communities the best in modern medicine. And this widening of responsibility was altogether natural. Hospitals, founded on a basis of service, had as their dominant motive the inherent desire to improve this service and to extend it to the entire community."

My plea is for the doctor to study this most important social question more thoroughly, to assist the public in realizing that it requires education and hospital equipment to serve from the public health standpoint.

As Dr. Edwards, president of the California Medical Association, stated in his address:

"I am pleading for a closer relationship between physicians and the public and between physicians and each other, both in and outside of the medical society meetings. This is necessary if we expect to meet the influences that are directed against scientific medicine and surgery."

A medical society usually succeeds or fails, in proportion to the faithfulness, sincerity, and activity of its secretary; therefore, I want to thank our secretary, both individually and on behalf of the association, for the indefatigable service he has so cheerfully rendered us.

We are the smallest State in the union in population; therefore, it ought to be easier for us to understand each other and to educate the public in regard to medical subjects than our sister States.

Who Shall Teach and What Shall Be Taught—

Since there is nothing which is so vital to public interest as community and personal health, it follows that there is nothing which should be more widely advertised nor more freely talked about. The public has seized psychology by the tail and is excitedly swinging that and the various gland theories and truth serums and such sensational aspects of science as creep out under the tightly closed door of the laboratory; and the swinging and flinging broadcast of the absurd deductions, uncorrected and unproved, are doing not only harm to the profession we uphold, but, which is much more important, to the public of whose safety we are the custodians. —(Henry P. Newman, Bulletin San Diego County Medical Society, July 20, 1923.)

VIS MEDICATRIX NATURAE*

By W. F. McNUTT, Sr., M. D., San Francisco

First, let me say, I hold no brief for any of the numerous cults such as mind cures, faith healers, Christian Scientists, immanuel movements, Coueism, chiropractors, neuropaths, etc. I advocate no special system of therapeutics. I have practiced medicine for over fifty years, using any and every remedial legal means to cure or relieve the patient, as is every physician's duty. Every successful physician must learn when to depend on *vis medicatrix naturae*, with a placebo, and when a careful examination is necessary, to diagnose and treat the patient.

He will not learn this from text-books or didactic or clinical teachers, for the reason it is not taught. The physician is left to learn this branch of his professional career by experience or intuition. Some forty years ago Sir William Gull was the most prominent consultant in London. Many men, and especially women, paid him their two guineas for his famous placebo. He had learned when a placebo was required or when a careful examination was necessary. He had learned when to rely on *vis medicatrix naturae*, or when medicine or surgery was necessary. No man had a greater contempt for quacks.

I am rejoiced at the stand our two universities have taken in regard to medical education. In the future those who receive a diploma from either of these medical schools will be men and women of education and be in the category of the learned professions.

There is a science in the study of medicine and an art in the practice. The practice of medicine is not and never can be a science. Every physician knows that most of our remedies are given empirically; there are few specifics. The successful physician must have a knowledge of human nature, must understand the temperament and prejudices of his patient. He will often be obliged to compromise with his patients on non-essentials and be firm in matters that make for the patient's welfare. The physician must keep in mind *vis medicatrix naturae* and that many patients will make a good, quick, and permanent recovery when given a placebo, with assurance that it will make them well. In dealing with organic or so-called functional diseases, he must not forget his patient is a living, thinking, reasonable or frequently an unreasonable human being, not an inanimate object. I hope every physician will be impressed with Shakespeare's wisdom when he makes Hamlet say, "There are more things in heaven and earth, Horatio, than are dreamt of in your philosophy." Hippocrates said, "Nature is the physician of disease. Charron, a French physician, who probably wrote the greatest and best book on *vis medicatrix naturae*, says: "The most that a doctor can do is to assist the body in making use of this power, which is nothing more than the action of the unconscious mind." Brice, in the London Practitioner, says: "We are compelled to acknowledge a power of natural recovery inherent in the body." Herbert Spencer

* Read before the Committee on Medicine, San Francisco County Medical Society, October 2, 1923.

says: "It is working out in the body of a law which obtains throughout all nature."

In the twenty-first edition of Dunglison's dictionary, *vis medicatrix naturae* is defined, "Instinctive healing power in an animal or vegetable, by virtue of which it can repair injuries inflicted upon it, or remove disease." Gould, third edition, "The healing power of nature apart from medical treatment."

The teachers of medicine evidently think they have done their duty to medical students by teaching them the science of medicine. And yet they are supposed to prepare students to practice medicine. They teach the use of all the apparatus that make for the scientific diagnosis and treatment of disease. They do not teach psychotherapy; they do not even mention *vis medicatrix naturae*. This important branch of every physician's routine practice is left for the physician to learn by experience. Some 500 years ago Ambrosé, the distinguished French surgeon, wrote on the wall of the *ecole de medecine*, "Je le pansay et Dieu le guarit" (I dressed the wound, God healed it). The advanced modern surgeon would say, "I dressed the wound (antiseptically), that mysterious (power) *vis medicatrix naturae* healed it."

The physician who depends entirely upon science for the diagnosis and treatment of his patient must often fail to relieve or cure the complaint of which the patient suffers or thinks he suffers. In very many cases the patient needs a placebo, given with the assurance that he will soon be well. As a rule, patients care nothing for an elaborate, expensive and scientific examination; they want to be cured. Playfair, in the *British Medical Journal*, says, "The tendency of advanced medicine of the present day is, unfortunately, to overlook cure in the zeal for accurate diagnosis and correct pathology. In short, it is science rather than therapeutics that is the aim." I have already stated that therapeutics, the treatment of disease, is not a science and never can be. "Coming events cast their shadows before." The time will soon be when teachers in our medical schools will teach psychotherapy. This important branch of the practice of medicine, will not be left to the cults. The facts are, if *vis medicatrix naturae* had been taught and appreciated by the profession there would be fewer cults today.

There are only a few left over, as it were, who do not believe that nature ever cured anyone, who do not believe in *vis medicatrix naturae*, nor do they recognize the conscious or unconscious mind or the influence of the mind on the body. With a scientific education, well-grounded in the foundation of the science and practice of medicine including psychotherapy, the future physician will not leave an important branch of practice to cults and ignorant quacks. Who is to blame for this disgraceful condition? When medical schools wake up to the fact and teach that *vis medicatrix naturae* occupies a large part of every physician's daily practice, their graduates will be of much more service to the people and there will be a change in present conditions, but not until then.

SOME PHASES OF GONORRHEAL COMPLICATIONS AND THEIR PREVENTION BY ATTENTION TO CERTAIN POINTS IN THE TREATMENT OF ACUTE GONORRHEA*

By JAMES STEINBERG, M. D., Los Angeles

One of the most interesting cases of multiple complications arising from an original Neisserian infection of the anterior urethra, came into my service at the Kaspar Cohn Hospital in Los Angeles about one and a half years ago, showing the extensive complications that may occur in a single instance, following an apparently simple acute anterior gonorrheal urethritis. The case should serve as a warning against the consideration of this infection in too light a manner.

The cystoscopic findings, in conjunction with the X-ray and bacteriological examinations should prove instructive as well as interesting in showing their inestimable value in the complete ultimate analysis of these cases. The case I wish to cite is as follows:

Mr. H. S., 31 years old, an iron worker by occupation. He was admitted to the hospital, running a temperature of 103 degrees, unable to void through the anterior urinary canal, complaining of continuous pain over the bladder and scrotal regions. He gave a history of previous Neisserian infection as follows: First infection of gonorrhea ten years previously, lasting six weeks, followed by a second infection six years later, lasting two months. This second infection was complicated by stricture of the urethra. A third infection of gonorrhea was acquired two years later, lasting five weeks. Syphilis was denied. He was operated upon for a right inguinal hernia seven years before. For the past two years the patient has noticed that his stream has been gradually becoming smaller and his urine more difficult to pass. Two months ago the scrotum began to swell, gradually increasing in size. This was accompanied by great pain, chills, and fever. Two weeks later the scrotum ruptured, discharging urine and pus. After that the patient passed most of his urine through the sinus in the scrotum.

Preliminary objective examination revealed the scrotum to be a large gangrenous mass, about the size of a good-sized grape fruit, very foul-smelling, inflamed, and discharging dark, thick, yellowish-brown pus and urine. The urethra revealed an impassable stricture at the bulbo-membranous junction. A smear of the pus from the discharging sinus in the scrotum revealed the staphylococcus, and colon bacilli, but negative for tubercle bacillus and gonococcus.

I performed a preliminary operation on March 5, 1921, to reduce the inflammatory mass. The scrotum was laid wide open and all the gangrenous tissue removed. A sinus was disclosed in the inflammatory scrotal mass, through which the patient passed his urine. The scrotum was sewed up and a drain left in the wound. Within twenty-four hours the temperature began to subside, and the patient was quite comfortable.

* Presented to the Section on Urology at the Fifty-second Annual Session of the California Medical Association, San Francisco, June, 1923.

A few days later I passed a filliform bougie through the stricture at the bulbo-membranous junction, with the aid of the Buerger universal operating urethroscope, attached a urethratome, and performed an internal urethrotomy. A permanent rubber catheter was inserted through the anterior meatus into the bladder, because of excessive hemorrhage, and left in place for two days, after which time it was removed. Following this procedure, the patient voided a good-sized stream. Daily irrigations of the bladder were then instituted and the urethra kept open by subsequent dilation. The bladder urine at this time was cloudy and full of pus. A smear of the secretion expressed from the prostate showed many pus-cells.

The patient began to improve under general and local treatment with massage of the prostate, bladder irrigations and irrigation of the wound, which healed very rapidly. The urine had now stopped coming through the scrotal sinus.

At the end of several weeks, the patient was cystoscoped, with the result that the examination disclosed a cystitis and a moderate double pyelonephritis with both kidneys showing, however, very little impairment of function, and no obstruction in either ureter. X-ray examination revealed no calculi nor any other abnormalities in the upper urinary tract. Bacteriological examination revealed the pyelonephritis to be due to the colon bacillus. Both kidney pelves were irrigated with boric acid solution, followed by injection of the pelves and ureters with a 1-500 solution of silver nitrate. This process was repeated ten times at intervals of six to seven days, until the specimens from both kidneys were clear of pus. The strength of solution of silver nitrate was gradually increased with each succeeding treatment until 1 per cent was reached. The bladder irrigations were continued daily during this time, as were also the urethral dilatations with the posterior Kollman dilator, together with prostate massage at less frequent intervals, until, at the present time, the patient has been freed of infection, and is passing a good-sized stream. He is now being treated only to keep the urethra wide open and prevent any possible contraction at the site of the old stricture.

The case herein cited will serve to bring to your attention the importance of proper and thorough treatment of early gonorrhea, that such a succession of unfortunate complications as occurred in the above case may be avoided. In a large majority of cases it lies within the power of the physician treating the case to take the proper precautions in order to prevent such serious and extensive involvement. The fact should not be lost sight of that every case of acute gonorrheal anterior urethritis is a potent factor in the possible production of dangerous complications resulting, in some instances, in very grave and permanent danger to the urogenital tract.

There are a number of important factors to be considered in the early treatment of acute gonorrhea, such as proper diet, rest, and an abundance of fluids to keep the anterior urethra constantly washed and drained out from above. The position of the penis should be considered very carefully

when fitting a suspensory. This should be worn so that it does not constrict or bind the urethra, nor should it elevate the glans so that it is brought up toward the abdominal wall. In this position the pus, instead of running out of the meatus, will go the other way and increase the possibility of posterior involvement. No local injections should be used for the first few days of the acute infection. The silver salts are particularly contra-indicated during this time, as they aggravate the inflammation and increase the pus.

The treatment should commence by the administration of internal medication, a proper amount of rest with restraint from physical exertion, and a bland diet with elimination of spices, condiments, acids, red meats, alcohol, and any other articles of food which might irritate the urinary tract, in conjunction with an abundance of fluids to relieve the acute symptoms. The formula which I have found to produce the quickest relief and most satisfactory results in reducing the discharge and allaying the stinging and burning of the acute urethral inflammation, consists of a combination of codeine 1/6 grain, tincture of belladonna 10 gts., urotropin 5 grains, and palmathol as a vehicle to 1 drachm. This is administered in 1 drachm doses in a glass of water every three hours.

In allowing the patient to handle his own local medication, he should be carefully instructed in the proper method of procedure in the technique of injection of the anterior urethra. Particular stress should be laid, and the patient cautioned, to correctly follow religiously every single detail. Therein lies the secret of success or failure. He should be taught how to sterilize both the syringe and the penis, and especially cautioned to inject the solution slowly and smoothly, and not to overdilend the anterior urethra.

Careful attention should be given to the strength of solution and method of injecting the anterior urethra with the silver salts. Strong solutions should never be used. I believe that more complications are brought about by faulty manipulation of local injections than any other one thing.

The patient is given 2 ounces of a 5 per cent solution of freshly prepared argyrol and a bulb urethral syringe. It is unwise to provide the patient with more than one week's supply of any organic silver salt, for at the end of that time the solution has commenced to deteriorate. The bulb syringe is much safer to prescribe than the piston syringe. It is cleaner, easier to handle, and the solution can be injected much more smoothly and without jerking. This is almost impossible with the average piston syringe.

The patient is instructed to boil the syringe, draw up 1 drachm of solution, and set the syringe aside. He then voids and thoroughly washes the penis with soap and water. The next step is to grasp the penis just behind the corona with the middle and ring fingers of the left hand, holding the lips of the meatus apart with the thumb and fore-finger. Holding the syringe parallel with the body of the penis, and firmly fixing the blunt-nosed tip of the syringe against the meatus, he injects the solution very slowly. It is allowed to remain

in the anterior urethra from three to four minutes, by closing the meatus with the thumb and forefinger of the left hand. The patient should be cautioned not to compress the urethra behind the meatus to try and keep the solution from entering the posterior urethra, as serious consequences might ensue. At the end of from three to four minutes, or sooner if it burns, the solution is allowed to flow out. The patient should not void immediately after. The penis is then placed in a gauze bag, with a small piece of cotton at the bottom. The patient is cautioned to have the bag large enough so that the meatus does not touch the cotton, as the pus will stick to the meatus and thus keep re-infecting the urethra.

This method of injection is carried on for a varying period of from five to seven days, three to four times a day until the acute inflammation has subsided. The patient should always void before going to bed, for if the argyrol is left in the urethra over night, it will irritate and increase the discharge. At the end of this period, the argyrol solution is replaced by a $\frac{1}{2}$ per cent solution of protargol for three to four days, and then increased to 1 per cent.

During the course of the treatment, the patient is seen every other day, the urine tested, a smear taken, and all the points in the technique of injection checked up.

If the discharge does not entirely clear up with this treatment after two to three weeks, and there are no gonococci present, an astringent injection may be used twice a day in the form of zinc sulphate, 4 grains, and liquor plumbi subacetatis, 3 ounces.

The argyrol is used at first because it is less irritating than protargol in the very acute inflammatory stage. After this, however, it becomes ineffective and must be supplanted by protargol.

The injection method of treatment, as above described, is continued for from twelve to fifteen days, at the end of which time the average uncomplicated anterior urethritis will have subsided. There will be no discharge, and the urine should be clear. The final test should then be taken by gently milking out the glands in the anterior urethra, and another specimen examined by massaging the prostate. If no pus or gonococci can be found, the patient is cured. In any case where there might be a doubt as to the question of a cure, cultures should be made from both the urethra and the prostate, and then the specimens examined.

Prostate massage is absolutely contra-indicated during the course of an uncomplicated anterior urethritis, as it will tend to produce a posterior infection. Vaccine therapy is also contra-indicated, as it is in any other active acute inflammatory process.

Thus we may see that the treatment of every case of the anterior urethra is a very serious matter, and should be so considered. The treatment should be conducted with all due regard and proper precaution toward the prevention of extension of the inflammatory process by paying particular attention to every detail in management and properly guiding the patient in all the various points of technique.

When complications have already been acquired,

and especially in long-standing cases, as illustrated in the above example, where it was reasonable to suppose that the patient had acquired extensive involvement of the genito-urinary tract, it is absolutely essential to study each separate complication in detail. This is imperative, particularly in long-standing cases of bladder infection which do not clear up under treatment. In every such case, the patient should be cystoscoped and the ureters catheterized to determine the presence or absence of pyelitis, and the presence or absence of obstructions in the ureters, which might prevent the proper drainage from the kidney pelves. X-ray examination should be conducted as a routine to determine the presence or absence of calculus, the size and position of the kidneys and any abnormalities in the kidneys or ureters. Bacteriological examination will determine the type of infection. The kidney pelves, if infected, must be properly treated until the infection has been completely eliminated from them, as demonstrated in the above case. This must necessarily be accomplished before a cure can be expected.

In addition to daily bladder irrigations and treatment of the urethral stricture as indicated in the above case, together with massage of the prostate every four to five days when there is an accompanying chronically infected prostate, as soon as the patient has been cystoscoped, the ureters catheterized and a pyelitis has been established, lavage of the kidney pelves should be instituted. The patient should be cystoscoped, the ureters catheterized, and the kidney pelves irrigated with boric acid solution followed by injection of a 1 to 500 solution of silver nitrate every five to seven days. This is continued, gradually increasing the strength of solution of silver nitrate by one-tenth of 1 per cent gradations to 1 or $1\frac{1}{2}$ per cent until the specimens from both kidneys are clear and the pus has entirely disappeared.

The instructive points of value to be learned from this case are:

1. The importance of prophylactic management, and the necessity of extreme care in properly carrying out each detail in the technique of treatment of a case of acute gonorrheal anterior urethritis, in order to prevent complications.

2. The necessity of exhaustive study of complicated cases to determine the extent of involvement of the infective process with a view toward eliminating infection of the upper urinary tract.

3. The inestimable value of cystoscopy, together with catheterization of the ureters, X-ray, and bacteriological examination in these complicated cases to determine the full extent and type of the infection, the presence or absence of obstruction in the ureters, or any other condition which might be of pathological importance.

(509 Junior Orpheum Building.)

DISCUSSION

Guy Manson, Mattei Building, Fresno—That an acute gonorrheal urethritis is not a trivial affair has long been recognized by the medical profession. But to get the layman to realize this is often a very difficult matter. There is always some well-meaning friend on hand who has cured himself in a week's time with some patent medicine and is ready

to give your patient all the advice he needs. This often prevents the close co-operation necessary in handling these cases. Until we can find some way to compel the drug clerk to keep his hands off these cases, this will always be the case.

There is no difference of opinion regarding proper diet, rest, and abundance of fluid, but whether to begin at once with local treatments or not is, I believe, still a disputed question. Personally I do not believe that a weak solution of argyrol, 5 per cent or less, if carefully injected, does any harm. It allays the patient's anxiety and makes him believe everything is being done for his speedy recovery.

I think we oftentimes do not lay enough stress on the kind of syringe and the manner of giving the injection. I like to give the first injection myself, and I like to furnish the syringe myself; for I find I cannot trust the druggist to furnish the proper syringe, no matter how carefully we may specify what we want.

A properly fitting suspensory and drainage-bag is another important detail often neglected entirely by the attending physician. How often do we have patients referred to us who present themselves with a piece of cotton packed tightly under the foreskin, but who have never received any instructions at all on the matter of drainage.

I am glad to see there are some urologists who still have faith in argyrol and protargol. I have not had the success with some of the newer preparations that some have claimed, and their staining properties are most distasteful to the patient.

I thoroughly agree with the author in the necessity for thorough study, including cystoscopy, of every long standing case of bladder infection that does not clear up under treatment. These cases nearly always have an underlying kidney involvement.

In regard to pronouncing the patient cured, I doubt if a patient can be pronounced cured by simply examining specimens obtained by milking out the glands of the anterior urethra and massaging the prostate. Especially is this true if the patient is contemplating marriage. We have all seen patients who have been pronounced cured by competent men who have afterwards infected their wives, although they have had no new infection. I believe we should, whenever possible, prevent our patients from marrying for at least one year after the disappearance of all symptoms, regardless of our laboratory findings.

E. Spence DePuy, Dalziel Building, Oakland—To prevent the acute case of specific urethritis from becoming chronic, to avoid if possible the occurrence of complications, the incidence of which is high even with the best of care, and to properly manage these complications when they do occur, are serious problems.

It is pretty generally accepted at the present time that among the important therapeutic measures, rest and the copious ingestion of water are really important. Of these two it is fairly easy to get the patient to take sufficient water, but the necessary rest, for one social reason or another, is more difficult, with the result that complications are more common than they would be if so simple a measure could be enforced.

It is, of course, essential that the discharge be frequently examined for the gonococcus, for its presence or absence determines the treatment. Non-observance of this rule and the use of astringent injections is frequently responsible for prolongation of the case into the chronic class, resultant infiltration and urethral damage, and not uncommonly complications beyond the external sphincter. Among the complications not so frequently recognized as it should be is acute seminal vesiculitis. This is a condition which, if recognized at a sufficiently early period, yields readily to proper treatment; but treatment delayed becomes difficult of cure. I feel that

vas puncture and instillation of collargol into the vesicles should be done. The number of cases which have been treated in this manner, under the proper indications, is now sufficiently large that the procedure is no longer experimental and should be kept more prominently in mind.

Dr. Steinberg (closing)—Regarding the allaying of the patient's anxiety at the commencement of treatment, it might be said that if the general plan and details of management are explained at the outset, the patient will have enough to do to occupy his entire attention without the immediate administration of a local injection of a silver salt. The internal medication of codein and belladonna, as above described, in addition to the other details of early treatment, will so decrease the local urethral inflammation and diminish the discharge that the patient will then enter upon his active period of local medication with more encouragement and enthusiasm.

As to the question of the pronouncement of a final cure in these cases, it is conceded that the term "cure" is indicative of a clinical cure, after which no further active treatment is required. The case should be watched, however, and seen at periodic intervals for some months after for any sign of recurrence.

If the posterior urethra and prostate have been involved in a chronic case of infection, even though no evidence of infection can be demonstrated with repeated tests for years after, it is a question as to how nearly normal and pale pink-looking the mucous membrane of the posterior urethra ever becomes. In most of these cases that I have passed a cysto-urethroscope, the mucous membrane of the posterior urethra has appeared reddened and inflamed.

The results of improper manipulation of acute urethral inflammations are so far-reaching in character that it is imperative to make an accurate diagnosis before commencing any treatment, in order to establish, not only the extent of involvement, but also the exciting cause of the inflammatory process. A diagnosis should never be made from a cursory microscopical examination of the physical evidence of the urethral inflammation. A microscopical examination of a smear from the urethral discharge is absolutely essential at the outset in every single case.

Many cases of urethral discharge that have been treated for gonorrhea and aggravated by the administration of local anti-gonorrheal injections, have come to my attention. Microscopical examination of the urethral discharge in these cases revealed an absence of the gonococcus, and following the removal of the local injection that had been used, the discharge disappeared at once. More extensive examination in these cases usually reveals an infection in the posterior urethra and prostate of a non-specific origin which requires particular attention to those parts, and not the handling of such a case by the peremptory administration of an anterior urethral injection without further study of the case, including microscopical examination of the urethral discharge.

Causes of Indigestion—Normally the digestive powers are equal to the work demanded of them—that is, the digestion of the food. The equilibrium of the digestion may be disturbed by a decrease in the powers of digestion or by an increase in the work to be done in digestion. The decrease in the powers of digestion may be due to overfatigue, either physical or mental, to disease outside of the digestive tract, and to disease of the digestive tract. The increase in the work to be done in digestion may be due to improper methods of eating, to too much food otherwise proper, or to improper food.—(John Lovett Morse, *Journal Iowa State Medical Society*, October, 1923.)

HEALTH SUPERVISION IN SCHOOLS *

By EDNA L. BARNEY, M. D., San Francisco

To serve the child is to serve all who come hereafter. That child is best served whose emotions, intellect, and health habits are best trained. It is most fitting that the emotions be trained in the home, the intellect in the school, and health in both. From these advantages must follow a better ability and a more righteous courage to meet life's problems.

Unless scientific knowledge concerning health can have a very practical interpretation for general use, and especially for those associated with the care of children, this knowledge will remain far from rendering its full service.

Health supervision in schools means, in part, health instruction to parents. It does not suffice merely to send parents the reports of physical examinations. It is necessary to cultivate their disposition for receiving health truths with gladness and with understanding. In accomplishing this important part of the work, the greatest aid to the school physician is the patience and perseverance of the school nurse. Success greatly depends on her persistent effort and her consciousness of responsibility.

Many parents have a confused notion that health supervision in the school means the treatment of sick children, and they are, therefore, apprehensive that parents' rights will be invaded; but as a matter of fact, health supervision in schools does not imply treatment of sick children, except with first aid measures in case of accident or sudden illness, or isolating the child with a contagious disease for the protection of others.

Health supervision in schools implies examining children in order to notify parents of correctable defects, as for instance, faulty vision, dangerously large or diseased tonsils, defective hearing, heart or lung conditions, adenoids, carious teeth, malnutrition, faulty posture, and any impending illness. The parents are promptly notified in order that the child may receive that early attention which forestalls the dire results of neglect.

In former times when people entered a drug store and were confronted by long rows of glass-stoppered bottles, gilt and Latin labeled, they felt a reassurance of health. The fear of sickness was thus subdued, but not the cause of sickness. Little was known of the real cause of disease; comparatively little was known about its prevention; so people did their best while faulty living habits and infection did their worst. Health supervision in schools and a well-organized department of public health had not yet arrived.

Health supervision in schools aims to disseminate the simpler truths of science, both for the direct protection of children and that children themselves may more easily grasp the art of living. Nothing is more worthy of our concerted efforts than ways and means to make children more secure against ill-health. With this design, the school is becoming a sort of broadcasting station for health ideas.

To introduce health ideas into a home is easy,

but to have them consistently applied is often difficult. This difficulty results, to a considerable extent, from parents trying to direct the child too much by words and too little by example. At the breakfast table the father, in a very deliberate manner, explains to his young son the evil effects of coffee, and in an equally deliberate manner pours for himself a second cup. At the evening fireside, while the mother tries to persuade her little boy never to use tobacco, pa is quietly blowing cigar smoke against his evening paper. We can be reasonably sure that in the back of that boy's head there are thoughts of a little research work—his technical requirements will be a cup of coffee and one of dad's cigars. It is highly probable that the results will be eventually about the same as they were in the preceding generation under similar circumstances, all of which goes to show the general trend of unaided health supervision in the home.

Let us for a moment consider a wonderful factor of control in developing the habits of the child. We can say that child life is to a very large extent made up of mysterious, self-impelling influences strangely acting independently of consciousness or volition. These self-impelling influences we call reflexes. There is one reflex which is marvelously dominant in early childhood—this is the reflex of imitating. By this reflex the child is impelled to do what he sees others do, and especially what he sees his parents do. It is this strange, guileless mimicry in early childhood that keeps the home supreme in swaying the reflexes which are the forerunners of lasting emotions, those emotions which so largely determine for better or for worse the final attitude toward life. Bringing these deep impelling early reflexes and the latter emotions under the reign of will-power is the story of education. Let us repeat that this early reflex of imitating is a most subtle and determining influence, therefore it is highly important that this reflex be rightly directed to health habits.

We can not measure the school influence on health without knowing the home influence. The school is the foreground, the home is the background of this health work. We strive for better health guardianship by the parents and better health habits in the child. Health guardianship by the parents means not only securing remedial measures in sickness, but in a far greater sense the preventive measures against sickness. Above all, parents must be impressed with the salient truth that the big things in health are the little things done at the right time.

Some parents have the idea that when medical attention is available in case of illness, it obviates the necessity of health consideration before illness. They see the importance of guarding the child during sickness, but they do not see the importance of guarding the child during health. This is the old idea of cure versus prevention. In other words, no need to worry about sickness, for when the child is really sick, call the doctor. This abiding trust in medical aid is largely engendered by a false assurance in that magic word "cure." Though medical art has long been dedicated to "curing" people, today medical science centers its action on

*Read at the California Conference of Social Work, Yosemite Valley, May 23, 1923.

preventing sickness. People in general are unaware of the tendency to permanent bad results following sickness in spite of all treatment, even in those cases where recovery at first seems complete. Scientific thought is being more than ever directed to the end results of various diseases in relation to the permanent impairment of future health. Parents should be better informed concerning the too often vain hope of cure and be made more clearly to understand the importance of preventing the primary disease.

It is hard to realize that millions of happy children are endangered by the lurking treachery of diphtheria, scarlet fever, tuberculosis, smallpox, and poliomyelitis. These diseases annually have not only taken the lives of thousands, but have caused other thousands to continue on with one or several of the following conditions: heart permanently damaged, kidneys injured irreparably, eyesight or hearing impaired or lost, mentality blurred, bodies and limbs paralyzed and deformed in varying degrees. From these results we realize how often the term "cure" signifies merely that the child has escaped death to continue on partially, sometimes wholly disabled, and the abiding trust in "cure" becomes the meager solace of forlorn hope.

Only those parents may expect to have their rights invaded who assume the right to neglect the child. Parents' rights with children become better understood when the rights of children are better understood. In olden times a parent had the right to sell his children; later on he had the right to rent his children as bond-servants, the right to keep them at labor, the right to maltreat them by way of punishment, and the right to keep them from school. One by one these ancient rights of parents have fallen, and one by one the rights of children have appeared; and whatever the parents' rights have been or the child's rights have not been, it is at this time and in this country agreed that children shall have the right both to health and to education. So we see that rights are not inherent; they are the products of civilization, the outcome of bitter experiences of mankind through the ages. And in the twentieth century the rights of parents are balanced by what society determines to be the rights of children.

Even within the medical profession there are some, relatively a few no doubt, who feel that their rights are being invaded by health supervision in schools. They likewise must be reminded that they have no inherent rights over children. In a problem so vital to humanity as community health, vocation must subserve and not override that fine humanism—the greatest good to the greatest number. The medical profession is justly proud of a large contribution to social betterment and assumes leadership in ways necessary to make more secure the health of childhood. As yet preventive measures have not reached their highest possibilities; much sickness remains to invoke both the art and the science of the physician.

Besides the occasional word of opposition from a parent or a physician, we sometimes hear a dissenting voice in the teaching profession. Some teachers show impatience at having the routine

of their work interrupted. They seem to forget that the worst interruption to well-ordered work is sickness, and that the greatest routine to strive for with children is the routine of health. Although the apathy of a few teachers may sometimes lessen the smoothness of our work, it is gratifying to know that almost all the teachers are now co-operating with the school nurses and other members of the public health department.

We may also mention the need of wider support from serious-minded writers, and of not leaving the propaganda of health so much at the mercy of those who specialize in literary condiments for magazines, who, sacrilegious in science, try with jingling paradoxes to drown a sound thought in the sound of words, and with the discords of fallacy would stop the echo of truth; or those who qualify themselves with a vegetarian diet to pose as health wizards. But the world loves a laugh, and we soon forgive all who have been intentionally or otherwise the funmakers; for in fact their sense of humanity, and especially their underlying sympathy towards the welfare of children, have been too often noted to consider them other than gentle foes. With a goodly reassurance we read, in an essay on health matters by Mr. George Bernard Shaw, this parting advice to children: "Be careful to go to a school where there is what they call a school clinic, where your nutrition and teeth and eyesight and other matters of importance to you will be attended to."

The need of health work is strongly set forth by a few statistics. Of the 22,000,000 school children in America, six and one-half million are so much below consistent weight that they must be classed as malnourished; 1,000,000 need to be treated for diseased tonsils and adenoids; 4,000,000 have visual defects; 15,000,000 need dental treatment; and it is not known how many million are suffering from skin diseases and parasites.

In a recent survey of industry by the Hoover Commission it was found that one billion dollars could be saved annually to industry by reasonable health education and supervision. If this stupendous saving could be accomplished by guarding the health of adults, how much more could be saved in terms of health by beginning health education and supervision in childhood! Work looms large for public health service.

We see the increasing amount of organized health work being conducted by women, but as yet there are only 3500 school nurses in the United States to supervise the health of 22,000,000 children. This means that a vast number of school children are without health supervision, and in those cities employing school nurses there is not infrequently an apportionment of from three to four thousand children to each nurse, which of course shows merely the beginning stage of the work.

It is a most promising fact that educated women are entering the nursing profession. Nursing has become a profession. The education and training of the public health nurse qualifies her to give as well as to receive directions; she is a health educator not only of children, but of mothers, and so

has the best opportunity to aid in general health education; she is the envoy with health tidings to the home. The public health nurse is doing a new and great work.

Few of us realize the large percentage of foreign element in our schools and how much the school nurse in her contact with the home can help to guide these children into becoming little Americans. Over half the children in the public schools of the cities of the United States are either foreign born or have foreign-born parents—57.8 per cent to be more exact. In some cities it is as high as 74.1 per cent. In San Francisco some of the individual schools reach 90 per cent. It is often the school nurse who introduces our American sanitary and health customs to the immigrant. Not all immigrants are uncleanly, but a considerable number seem to have cherished a tolerance to uncleanness, poor ventilation, and other customs not in accord with health requirements. By means of the school nurse they can learn the practical rules of sanitation.

Our modern efforts for compulsory education would have little significance without good school attendance, which largely depends on early detection of disease and early isolation of contagious cases. In San Francisco, the school nurse investigates every case of non-attendance of over three days' duration and uses whatever means are necessary promptly to correct matters. In the percentage of school attendance in the United States, Cleveland stands first with 88.6 per cent; San Francisco is a close second with 88.4 per cent, which confirms the efficiency of a public health department aided by school nurses, and we can now say of our city, with apologies to Bret Harte:

No longer indifferent of thy Fate,
Serene, thou sittest at the Western Gate.

In San Francisco, during the fall term of 1922, the medical school inspectors, of whom there are five, examined 19,897 school children. Twenty-one school nurses during the same period sent out 6777 defect notices and made 12,521 visits to the homes of the children. As a result, 745 cases of faulty vision were corrected; 1325 children had diseased tonsils and adenoids treated; 1581 were treated for carious teeth, and a great deal of work of a less serious nature was the large number of heads treated in ways suited to the occasion, innumerable sores healed, emphasis given to correct posture, and the persistent attention given to health habits in general.

Often the neglected child is an ambulatory pathology showing malnutrition, defective vision, teeth, tonsils, and valvular heart disease. The neglected child is not easily reached until he becomes a member of a school. The school makes the opportunity for the mass attack that enables health nurses and other members of the Department of Public Health to do their healthy work.

(306 Irving Street.)

We may be a bit old-fashioned, for we remember the doctor as he used to be and as he may be again, a balanced, lovable and dignified man who really knew his patients, not merely some specialized phase of their distressed organs and their rating in Bradstreet's.—American Physician.

THE RESISTANCE FACTOR IN FOCAL INFECTIONS

By H. D. NEWKIRK, M. D.
(From the Johnston-Wickett Clinic, Anaheim, Calif.)

I have felt for some time that more detailed study and investigation should be made of certain phases of the tonsil question in its relation to focal and systemic infection. The general principle of focal infection is well established. It has been proved in certain instances that the tonsils were the particular focus causing systemic infection resulting in rheumatic and arthritic conditions, since the systemic disease was entirely relieved following complete tonsillectomy. This has perhaps led some of us rather hastily to conclude that all tonsils showing cryptic debris or other evidence of infection should be removed, and if properly removed would clear up the rheumatic or arthritic condition. This is not always so, even when the most painstaking and thorough examination has been made by a competent physician, and a perfect tonsillectomy done. The longer one deals with these questions, if he is conscientious and follows up his cases, the more he will wonder if there may not be some factors of prime importance which are still unsettled or perhaps not even seriously considered.

A recent article along this line by Alvarez, which appeared in the *Journal of the American Medical Association* for May 26, 1923, is very illuminating. Alvarez shows that the results obtained by removal of tonsils in adults for certain chronic systemic conditions are, to say the least, very disappointing. It may be that many of the patients mentioned in his report, since they came to him from various localities, had had tonsillectomy done elsewhere. Yet the fact remains that tonsillectomy was done in certain instances on the grounds that the tonsils showed infection, and for the purpose of remedying a systemic condition, and, as an illustration of our point, but 10 per cent of the cases in which they were removed for "rheumatism" showed good results. Also, it is possible that certain of those in the rheumatic or arthritic group who were benefited by tonsillectomy had some other treatment such as extraction of infected teeth, physiotherapy, or climatic advantage which was the beneficial factor, rather than the tonsillectomy. Or that had these same patients who reported improvement by tonsillectomy taken the Abrams or Christian Science treatment, they might have reported as favorably. Statistics, especially medical statistics, are hard to interpret, but even those obtained from a series so small as Alvarez has given call for serious consideration. There are doubtless many good reasons for doing tonsillectomy, but we must know more about what will happen to the system as a whole after this operation is done, or what would happen if it were not done, if we are to give an intelligent prognosis in this class of cases.

Just as individuals vary in size, appearance, and so forth, it is reasonable to suppose that they vary in the matter of resistance to infection. One patient has a ruptured appendix and dies. Another has practically the same condition and makes a good recovery. So, through the whole list of diseases, one patient reacts favorably and another does not. Why is this? Allowing for difference in

virulence of bacteria and duration of the infection, we still have the major factor of resistance to infection or immunity which is of much importance in giving a prognosis, and especially in the matter of focal infection. If we had some way of measuring from time to time the resistance of an individual to a particular focus of infection, we could then make a graph showing whether he was approaching the danger-line or receding from it, and determine whether a tonsil, even though it contained cryptic material, should be removed in order to prevent the patient crossing the danger-line and developing rheumatism or arthritis. On that same basis, if tonsillectomy was done, the infection curve should subside. Whether this resistance should be measured in terms of blood chemistry (blood urea or sugar tolerance), by lymphocyte counts, or in some other way, we do not know, but it seems of sufficient importance to warrant the most exhaustive studies and experimentation.

A questionnaire recently sent out to a number of laryngologists and other physicians on this subject brought the following results:

Q. Is the resistance of the patient an important factor in estimating the progress of a focus in the tonsils?

A. Yes, 25; no, 3.

Q. Do you know any method of measuring individual resistance?

A. No, 24; by ancestry, 1; by diet, hygiene, exposure, infection, habits, etc., 1; by resistance to other infections, 1; by clinical judgment, 1.

The fact that twenty-five out of twenty-eight were very emphatic in their belief that resistance is an important factor, three only not being sure of its importance, and yet twenty-four had no way of measuring that resistance, is most interesting.

If future studies along this line result in accurate methods of resistance estimation we may, at least, be spared the criticism incident to ill-advised tonsillectomies. Also, we may be able to persuade many patients, certainly headed toward rheumatic torture in later life, to permit thorough search and adequate attention to foci while there is yet time.

DISCUSSION

Jerome B. Thomas, Frazer Building, Palo Alto—I agree with the author that it is highly desirable to be able to measure the resistance of the human organism to bacterial infection, in the interest of a clearer understanding of the nature and course of disease, and hence of more intelligent treatment and prognosis. But even if we should devise a reliable and practical method of measuring resistance, the latter may be so easily and rapidly lowered by fatigue, trauma, acute complicating infections, etc., that I cannot feel that even a high degree of resistance would justify us in a policy of watchful waiting in case of a chronic systemic infection accompanied by frankly diseased tonsils. The practical question at issue is, under what conditions are we justified in advising the removal of tonsils suspected of causing systemic infection "resulting in arthritic and rheumatic conditions"? Granting the importance of individual resistance, I consider it axiomatic that, in the event of chronic systemic diseases, such as arthritis, endocarditis, etc., all known foci of infection should be removed if possible, whether the resistance of the patient be high or low. The patient should be warned that there may be more than one source of infection and that several bacterial foci may have to be eliminated in order to afford him

the largest measure of relief or safety. If there be reasonable doubt as to the infectious role of the tonsils it is my practice to advise attention first to the dental and other foci. If this course is without result or only partially successful, I often advise removal of tonsils on suspicion, having in mind the facts that fairly innocent-looking tonsils occasionally show deep-seated areas of disease when removed and sectioned, and that the modern operation of tonsillectomy performed by a skillful throat surgeon is almost free from danger. It goes without saying that the best interests of the patients are preserved when the laryngologist works in association with the general physician and internist.

Saxton Pope, Butler Building, San Francisco—The indictment against the tonsil is such a serious one, and the direct evidence is so convincing, that it will take more than a speculative doubt to withhold a just sentence. It may be stated quite frankly that there are no innocent tonsils. In childhood they are the atria for lymphatic tuberculosis; the constant point of entrance for the streptococcus of multiple infectious arthritis and endocarditis; they are the nidus of absorption for myalgias and neuritis; they are definitely implicated in many chronic arthritides; they are a flagrant cause of foul breath, and I hesitate to enumerate a more extended list of their crimes. The sin of removing them is at worst only that of violating the sanctity of the human body divine, so earnestly protested by the chiropractors. 'Tis true that an occasional mishap results from the surgery, and that a few neuropathic singers have assigned their loss of voice to tonsillectomy, though this may be a blessing in disguise. In fact, the die is cast, let the game go on. In the words of that great modern poet, let us say, "Yes, we have no tonsils today!"

Harry R. Oliver, Flood Building—When we take into consideration the amount of investigation that has been carried out and the definite relation of focal infection to infections of the systemic structures, as well as, particularly, in arthritic and cardiac diseases, and the fact that the tonsils are most often the most prominent offending tissue, it would be the most logical procedure to remove them as possible or probable factors. In the examination of large numbers of tonsils, there is almost always some evidence of diseased condition to be found, and when in a diseased condition they are in most instances of no further value for the purpose nature intended, and had as well be removed as of no further use as resistant or protecting agents. There seems to be no chemical or biological method of testing the resistance of patients to infections of this nature, and one has to use his own judgment and make his own interpretation from the physical and other characteristics of the individual patient.

H. D. Newkirk (closing)—The general tenor of the discussion is that diseased tonsils should be removed, and with this I am entirely agreed even to the limit of 100 per cent if it can be shown that this figure is correct. I doubt, however, if the percentage is as high as that. If we agree that 100 per cent tonsils are diseased and should be removed, we may as well make it a religious seventh-day rite or have an amendment to the Constitution to that effect and be done with it. If I voted for such a measure I would hardly know how to answer some of these robust octogenarians who still have their tonsils and even a few teeth. I fully realize that at present we have no way of estimating resistance, and it was with the hope of stimulating such studies that this paper was written. The importance of this applies not only to tonsils, but to possible latent infection anywhere in the system. If successfully worked out, each time a healthy man had a physical examination his resistance level could be ascertained just as his blood pressure is measured, and a comparison of several of these readings taken at stated intervals would show him the increasing importance of a scrutinizing search for all foci, thereby avoiding a breakdown with systemic infection.

THE FLEXIBILITY OF ETHER VAPOR ANESTHESIA*

By LORRULI A. RETHWILM

A number of articles have been written about vapor anesthesia since Junker, in 1867, first blew air through chloroform and Clover, in 1871, vaporized ether. Some of these recommended its use intratracheally; others extolled some different machine, for many forms of apparatus have been invented. I am going to make a plea, however, for the more frequent use of ether as vapor.

It is now generally accepted that ether vapor is the anesthetic of choice for the anesthesia for tonsillectomy and all work about the face or neck, but its value for other cases, as for instance gall-bladder work, has not as yet been fully appreciated.

One of the advantages claimed for it is smooth induction. We find a nitrous oxid-oxygen ether sequence even more rapid and more pleasant to the patient and use this form of induction even in children. In babies a few days or weeks old we usually begin with the vapor, together with ether dropped on the vapor-mask.

The vapor we give is sometimes ether with air, and at times ether with oxygen, or we may pass both air and oxygen through ether at the same time. We consider the vapor formed in this way less irritating than that produced by dropping ether on a heated surface to vaporize it, and letting that pass to the patient.

The method of administration depends entirely on the case. We may pass a catheter into the pharynx through the nose, or occasionally through the mouth; we frequently use a vapor-mask covering mouth and nose, and at times insert a mouth hook, at the same time using a wire airway. These are our usual methods of administration. We do not use a closed method, but prefer the semi-open, though I admit it uses more ether than the closed.

Six thousand four hundred and nine anesthetics were given at Stanford Hospital in two years, starting June 1, 1921. Excluding 1698 of these, as they were nitrous oxid-oxygen and some spinal anesthetics, of the remaining, 2831 were vapor anesthetics, 1685 of these were tonsil cases or combination tonsillectomy or tooth extractions. The remaining 1136 cases of vapor anesthesia I have roughly classified into groups as follows: Oesophagoscopy and bronchoscopy, 28; dental cases, 96; other nose and throat work, 108; mastoid operations, 112; eye operations, 97; mouth, jaw, or tongue operations, 60; cleft palate and harelip, 20; thyroidectomies, 33; brain cases, 33; Hibbs, Albee, and laminectomies, 22; gall-bladder cases, 31; gastroenterostomies, 8; exploratory laparotomy and abdominal work, 34; laparotomy and minor operations, 138; appendectomies, 41; hernias, 37; proloric stenosis in infants, 6; rectal cases (mostly Kraskies), 12; kidney and ureter operations, 20; other genito-urinary operations, 36; breast amputations, 19; pilonidal cyst, 2; miscellaneous, 153.

We do not let internes use vapor on clinic cases, even though supervised, until they understand the

drop method and the condition of their patients. We always caution them that patients can very readily be put too deeply asleep with vapor, and that they must watch them carefully. The margin of safety is much greater when oxygen is used. Still, we hear of deaths from ether vapor anesthetics occurring from time to time—mostly not published—and these could be avoided if articles extolling the values of ether vapor would mention its danger. One more point is that, when vapor was first used, the machines were at times put together wrong and liquid ether would flow to the patient and cause death. We avoid the possibility of this by inserting a Murphy drip-bulb, without a hole, in the tubing that passes from the machine to the patient. With these two cautions, I can pass on to the many advantages of ether vapor.

I cannot write of ether vapor anesthesia without writing of oxygen-ether vapor, as we use oxygen for most of our cases. We do not heat our ether, nor do we blow air through it so rapidly that ice collects on the bottle. The air may be passed through two bottles of ether if necessary to have a strong vapor. We agree with Cable that ether vapor given to the patient at the end of a three and a half foot hose is usually at least within a degree of room temperature. Even a somewhat shorter hose will give the same, according to our tests.

One of the greatest advantages of ether vapor is that, if the breathing is shallow or depressed for any reason whatsoever (patient nervous or as found in some gall-bladder cases) and is not of sufficient warmth or depth to vaporize the ether dropped on a mask, this vapor given ready to inhale will reach the patient's lungs and put him to sleep without delay, and good relaxation is obtained in a very short time.

Although for most operations the patient is satisfactorily relaxed with ether vapor when his eyes are still rolling, deeper relaxation can be obtained in a few breaths by giving stronger vapor. This we do when the abdomen is being explored, when traction is made on the gall-bladder if the surgeon insists on profound relaxation, or at any time if for any reason the patient must be more relaxed. As soon as the manipulation or other cause for profound relaxation has passed over the quantity or strength of vapor is immediately reduced. This flexibility is especially valuable when, for instance, a surgeon unexpectedly decides to feel the gall-bladder at a time when the patient is lightly anesthetized.

During the entire course of the anesthesia there is an even maintenance—just the depth is varied—which can be done either by decreasing the rate of flow of the air or oxygen through the ether, or by cutting out one bottle of ether, or by having only part of the oxygen bubble through the ether. One of the chief reasons for the flexibility lies in the fact that the vaporized ether is ready for inhalation (and as I have mentioned, the patient will get it into his lungs even if he takes only small, shallow breaths). This is true provided there is an open airway, which must always be maintained not only for the smoothness of the anesthesia itself, but to

*Presented to the Section on Anesthesiology at the Fifty-second Annual Session of the California Medical Association, San Francisco, June, 1923.

prevent a high tension of carbon dioxide in the alveoli, which raises blood pressure. Moreover, laboring to breathe adds an extra strain to the patient.

This open airway can be secured in any number of ways, depending on the nature and site of the operation. In many patients nothing is necessary; some require a wire or other airway in their mouth to breathe freely. Again, a catheter may be inserted in each nostril to the pharynx—one catheter for the anesthetic, the other one for the patient to exhale through or for use with suction. We have never found it necessary to use intratracheal insufflation in any of our work, and in our use of vapor find all the advantages claimed for it without some of its disadvantages. In fact, intratracheal is being used less and less everywhere.

We keep all of our patients anesthetized as lightly as is consistent with the work that is being done. When giving drop-ether we have repeatedly been able to regulate the amount so nicely that the patient was awake on leaving the operating-room. However, with ether vapor, especially when given with oxygen, the patient receives less ether, is maintained asleep more evenly, and can be put more deeply and lightly under with more readiness than with any other method.

Because of the small amount of ether given, and because we prefer to keep the patient very lightly asleep at the close, we do not wash the stomach as a rule. In gall-bladder cases or in patients that have had fecal or other vomiting, we do wash the stomach.

In all cases where the stomach is not washed, the patient can be nearly awake at the close—how much so depends more on the surgeon and the nature of the operation than on the patient or the anesthetist.

It is known to any anesthetist that some patients require more anesthetic than others to relax them. Even the same patient may take more at one operation than at another, even for the same kind of surgical work, and naturally requires more during some procedures than during others, even at the same operation. We find ether vapor quickly and smoothly covers all these conditions, and a patient can be put sufficiently deep with a few breaths of ether vapor where several times as many breaths of drop-ether would be required.

The flexibility of the anesthetic is especially desired by those doctors who have the patients well-fare enough in mind that they want to keep them anesthetized as lightly as possible. Of course, if a surgeon cares only to have his patient absolutely relaxed throughout, vapor anesthesia would fill that requirement, too, but that is not why it is recommended.

There are a few serious heart cases that have really had a form of vapor anesthesia, though not listed as such. We have found that some myocardial degenerations, and others that were really bad risks, do perhaps best of all on a nitrous oxide-oxygen anesthesia with about 30 to 50 per cent oxygen, never giving less than 25 per cent, and adding a small amount of ether vapor from the attached ether container.

In conclusion, I must say that many advantages originally claimed for intratracheal and other vapor methods, are now found in almost any good skillful administration of anesthetics. These are, for instance, absence of delirium at start and finish, practical freedom from mucus, very little vomiting, and a much better condition of the patient at the close.

Ether vapor, especially when given with oxygen, surpasses other forms of ether administration in giving: (1) Even maintenance; (2) perfect relaxation with less ether; (3) proper oxygenation with less demand on the muscles of respiration and on the circulation than other methods.

Wound up with, and at the bottom of these advantages, is the perfect flexibility of this form of ether, whereby the level of anesthesia can be readily and smoothly changed at any time.

THE TREATMENT OF KELOIDS WITH RADIUM*

By LAURENCE R. TAUSSIG, M. D., San Francisco

In the minds of the majority of laymen and also many medical men, radium therapy is adapted only to neoplasms. This is far from true. There are quite a number of non-malignant conditions that are not only amenable to the rays of radium, but in which radium is the treatment of choice. One of the outstanding members of this group of benign conditions is keloid.

These stubborn new growths occur following some trauma and if excised almost invariably recur, usually in a worse form than before. Various forms of treatment have been tried. Surgery is sometimes successful, but only when the excision has been exceedingly wide, at least as radical as for a very malignant neoplasm. Surgery, either preceded by or followed by radiotherapy, either with the X-ray or radium, is frequently successful and is the method of choice in certain very extensive keloids. In certain cases X-ray alone is indicated. Properly applied, the X-rays are often capable of producing good results, particularly in recently acquired lesions. Recently some investigators in Germany have reported good results by the digestion of these growths with pepsin.

A keloid is essentially a hypertrophic scar. In some instances it is difficult to differentiate between a simple scar and keloid. Usually a lesion is classified as a keloid which is raised, shiny, hard, and pink to waxy in color which has developed following some sort of abrasion. There are frequently root-like extensions fading into the normal skin, but this is not always true. The cause of keloid formation is not known. People vary greatly in their susceptibility to them. Some develop keloid following any type of abrasion. It is the impression of most dermatologists that they develop most readily in negroes and other dark-skinned races, though they are seen in fair-skinned persons. Sometimes a patient will develop keloid following an apparently insignificant injury, without a history

* Read before the Section on Dermatology and Syphilology at State Society Annual Meeting, June 22, 1923 at San Francisco.

of having previously developed one, and may never again develop keloid. Among the traumata, burns are the most likely to cause keloids, especially extensive ones that are slow to heal, especially when there is secondary infection. Acne so frequently leads to keloid formation, especially on the back of the neck, that we have a clinical entity, keloid acne.

Keloid usually starts to develop shortly after healing has taken place and often increases for several months. Having reached its maximum growth, it remains stationary. There is no likelihood of malignant changes occurring. There are, however, progressive changes which make a lesion that has given no trouble and which has, therefore, not been treated, become increasingly unpleasant to the patient. These consist of a gradual contraction and hardening, due probably to a progressive decrease in vascularity. When it is first formed, a keloid is usually soft and pliable, but it later becomes almost cartilagenous.

The patient comes for treatment for one of several reasons. Probably the most frequent is on account of the disfigurement. This is particularly true of lesions developing on the face and neck. Impediment of activity brings in a few, especially those occurring in the popliteal space and in the antecubital area. Keloids are now and then quite painful, either due to their position or simply on account of the contraction. Probably the greater number of keloids are never submitted for treatment.

As in the treatment of most benign lesions, the chief requisite of a method of treating keloids is the production of the best possible cosmetic result. It is manifestly impossible to replace a keloid with normal skin by radium therapy, but it is possible to give the patient a thin, supple scar, level with the rest of the skin, and painless. It is usually dead-white in color, or becomes so a few months after treatment is finished. This ivory-white can if necessary be quite well camouflaged by the use of one of the walnut stains, particularly if the patient's skin is not too fair. Two conditions govern the probability of a good result by radium therapy. The first is the extent of the lesion and the other is its hardness. For very extensive lesions, especially those involving large portions of the chest or limbs, we are inclined to use X-ray alone, reserving radium for any recalcitrant areas. When a rapid result is desirable, operation may follow the first radiation and the scar again radiated. The result of this procedure is rarely as satisfactory from a cosmetic point of view, even when successful, as that following radiation therapy only. The hardness of the lesion depends on the time it has been present. Therefore, we would rather start treatment as soon after the keloid begins to form as possible, and before it has reached its full growth. A pink, supple lesion gives an infinitely better prognosis than a contracted, waxy, hard one. We must always bear in mind the possibility of the production of telangiectases by our treatment with radium, but it has been our experience that even very intensive treatment of keloids is less apt to produce this result than in any other skin condi-

tion. It must also be remembered that keloid, untreated, often presents telangiectasia and this should be brought to the attention of the patient.

In the treatment of keloids with radium we have in general two methods to follow. The more conservative is the use of the penetrating beta and gamma rays only, and the grading of the dose so as to produce no visible reaction at any time. The more radical is to make use of the superficial beta rays as well as the harder rays, producing moderate to rather severe reactions. The first method is championed especially by McKee, who insists that only the slightest reactions are permissible in radium therapy as well as in X-ray therapy. We have made use of both methods at various times, and believe that both are capable of producing good results, but that the more conservative method is likely to be useless in the case of a very thick, hard lesion and is always much slower. Hence, we practically always make use of all the available rays and give fairly stiff reactions. They heal promptly, and we have seen no case in which extensive telangiectasia resulted. Either radium plaques or tubes containing radium salt or emanation may be used. It is essential to protect the surrounding normal skin with lead foil, in order to make the scar from treatment as small as possible. Keloid tissue requires a much greater amount of radiation to cause a reaction than does normal skin. Also thin, soft keloids react more readily than do the hard, thick ones. We usually give an initial dose with a half or quarter strength plaque screened with 0.1 mm. of aluminum for one to one and a half hours, using lead foil as required to protect the contiguous skin. If the keloid is linear or if tubes only are available, we start with a dose of twenty millicurie hours for each tube, screened with 0.5 mm. of silver and 1 mm. of rubber tubing. If the lesion to be treated with tubes is not linear, we try to space them 1 centimeter apart. The patient is seen again in about three weeks and if there has been no reaction, another treatment is given. If the reaction is severe, no further treatment is given until it has entirely subsided, and then a somewhat smaller dose is administered. During the period of reaction, soothing applications only are indicated. If the lesion is located so that it is subject to more or less friction from the clothing, a dressing of boric ointment or plain vaseline is used. If it is not subject to any irritation, a thick calamine lotion is applied two or three times a day. Very moderate reactions are sometimes pruritic, and when this is true, calamine lotion is used. We have found that the most prompt and satisfactory results follow superficial ulcerative reactions. It is not necessary to invoke such a reaction, however, in very recent small lesions. Following the treatment with radium, especially if the reaction has been quite marked, the scar will be quite a bright red for a time, but will fade to white in a few months. There is likely to be a ring of pigmentation about the scar, but this also will disappear with time. It is desirable to remove the keloid with as little radiation as possible and, therefore, when we are in doubt as to whether to give another treatment or not, we would rather err on the side of waiting a little longer.

The growth often continues to shrink for several weeks after the last reaction.

CONCLUSIONS

1. Radium is the treatment of choice for most keloids.
2. Treatment should be instituted as early as possible to obtain the best results.
3. In practically all cases a moderate to severe reaction should be given, using the soft as well as the hard rays.

(135 Stockton Street.)

DISCUSSION

Harry E. Alderson, 240 Stockton Street, San Francisco—We have been using radium extensively at the office and Stanford skin clinic for several years. Most of our cases treated by radium have been epithelioma. Next in frequency we have vascular naevi, then warts and, lastly, hypertrophic scars and true keloid. Our results have justified our increasing our supply of radium. To meet growing demands of physicians, the need of a large radium emanation plant in San Francisco, where the emanation tubes can be obtained readily by anyone competent to apply them, is a most urgent one. This will be provided soon.

In using radium one must very carefully consider the pathology of the condition to be treated. Failure to do this and indiscriminate applications of radium have been responsible for failures. The technical application of radium itself is not difficult and requires no special skill. A pathological diagnosis and the decision as to dosage are of paramount importance.

It is true that radium will destroy tissue, malignant or normal; but it is not indiscriminate destruction that is desired. Injudicious applications and improper screening may produce most serious and disfiguring results. It must be remembered that radium destroys most readily cells of the rapidly growing embryonal type, and that in moderate doses it stimulates normal connective tissue cells. This accounts for the satisfactory resultant scars after a properly treated epithelioma. It also accounts for the good results in young growing keloids. We have treated many hypertrophic scars and some true keloids with radium alone and combined with surgery. From our experiences we believe that surgery and radium combined give the best results. Careful extirpation of the lesion and then prompt radium treatment will give good therapeutic and cosmetic results. In the matter of dosage for these scars, we prefer the hard beta and gamma rays. Protection of the treated lesions against irritation from clothing and other objects, as mentioned by Dr. Taussig, is of great importance.

We are indebted to the writer for an interesting and instructive paper.

Hiram E. Miller, 135 Stockton Street, San Francisco—In discussing the treatment of any condition with one single agent, the other modes of therapy are often lost sight of or are undeservedly relegated to a place of minor importance.

There are certain extensive keloids that are best treated with X-rays; there are other smaller ones that, due to their location, can be more advantageously treated with radium, and there is a larger group of medium-sized lesions that can be satisfactorily treated with either X-ray or radium. Surgery in conjunction with radiotherapy may be necessary in certain old and disfiguring lesions. In the superficial and early cases 1 Holzknacht unit of unfiltered therapy at skin distance administered every four weeks will not give a reaction and will cause gradual absorption and softening of the patho-

logical process. In the older and thicker lesions filtered therapy should be used.

I do not think that we are justified in getting severe reactions in the treatment of this benign condition with either form of radiotherapy. The lesion will involute without a severe reaction, the patient will be more comfortable during treatment, and the end result will be as satisfactory even if the period of cure is somewhat more prolonged.

Charles E. Schoff, Farmers and Mechanics Bank Building, Sacramento—In the treatment of keloids there are a number of factors entering into the problem as to which is the best method of removing them and producing the best possible cosmetic results. The area involved, the anatomical position, the character of the growth, and the pathological changes present all enter into the question as to the method of treatment, whether it be by radium, X-ray or a combination surgery with radiotherapy.

One must be familiar with the pathological changes that have occurred and be able to clinically estimate these changes in making the choice of treatment. The early types seem to respond very rapidly to the beta rays of radium and to give splendid results as far as cosmetic results of a scar go.

The older, more fully organized hypertrophies are much more resistant, require more intensive raying and over a longer period of time to accomplish their dissolution, and the after results are not usually so cosmetically scar perfect, as there is the probability of producing evidence of intensive treatment in the adjacent normal tissue and over the affected area also.

I do not think that any one method of treatment should supersede the others, and we should not forget that we have other methods to combat this condition, and it should be treated with conservatism rather than with enthusiasm.

Dr. Taussig (closing)—I agree with Dr. Miller that it is well to keep in mind the various therapeutic methods adaptable to a given case, trying to pick the most suitable.

My experience with X-ray in the treatment of keloids has been limited to a few cases. The patients I have seen who have had surgery combined with X-ray have not had results superior or even equal to similar cases treated with radiotherapy alone, though the result was attained more rapidly. As to the matter of technique, I am quite sure that the use of moderately hard beta rays—that is, screening equivalent to 0.1 to 0.5 mm. of aluminum—is very helpful. I also think that an erythematous reaction up to the point of a superficial blister is justifiable and safe.

The Differentiation of Normal and Pathologic Human Thyroid Glands by Serologic Methods—Experiments were made by W. I. Terry and H. C. Shepardson, (San Francisco (Journal A. M. A., October 27, 1923), to determine whether or not the substances secreted by the abnormal thyroid gland varied to any extent from the secretions of the normal gland. The complement-fixation reaction was selected. Extracts made from normal thyroid glands of pigs were injected into rabbits, and the serum thus obtained was found to be capable of deviating complement in the presence of homonymous antigen. Extracts made from normal human thyroids were found to react in a manner similar to the extracts obtained from normal pig thyroid gland. Extracts were then made from pathologic human thyroids, adenomas being selected because of the ease with which normal glandular tissue could be removed. The serum obtained by injecting the latter extracts into normal rabbits was likewise found to be capable of fixing complement in the presence of the homonymous antigen. The results so far obtained indicate a demonstrable difference in the extracts of normal human thyroids and those of adenomas.

ELECTROTHERMOCAUTERY TREATMENT OF LEUKORRHEA DUE TO ENDOCERVICITIS*

By LINDSAY PETERS, M. D., Alameda, California

So common a complaint is leukorrhea, so manifold the misconceptions concerning it, so inadequate the treatment which it usually receives and so potent for evil its neglect that I trust it may not be amiss to ask your attention for a brief consideration of its cause and treatment.

There is perhaps no condition more frequently encountered in the treatment of women than leukorrhea; so common, indeed, is it that many women and some physicians appear to regard it as a normal and inevitable condition in the adult female. As a result of this erroneous idea, many a woman is subjected to the annoyance of frequent baths and douches in an effort at cleanliness; many suffer discomfort and even actual pain from the irritation of the discharge, and many others (how many one cannot tell) develop cancer on account of it.

I have referred to leukorrhea as though it were a disease in itself; but let us not continue to do so, for it is important to understand it as a manifestation of disease and not itself a pathologic entity. In the past it was generally regarded as evidence of endometritis, but routine microscopic examination of uterine curettings, in the days when curettage was an every-day procedure, revealed the fact that endometritis very rarely exists. On the other hand, both clinically and in the routine pathologic examination of uteri, inflammation of the cervical canal, known as endocervicitis, is of exceedingly common occurrence. Through this knowledge we have finally come to an appreciation of the fact that, omitting the transient, white discharge attending menstruation and the puerperium and the vaginitis of childhood and old age, leukorrhea practically always means endocervicitis. The frequency of occurrence of this condition during the epoch of sexual activity is due mainly to infected lacerations of the cervix and venereal infections. It is a matter of common knowledge that the nabothian follicles of the cervix, like Skenes' glands and the vulvo-vaginal glands, furnish ideal conditions for the perpetuation of an active gonorrheal infection, so that a chronic inflammation may remain at that site after it has died out elsewhere. Not always, however, is an endocervical inflammation due to these causes, for it is encountered not rarely in virgins. In these cases, although the condition may occasionally be the result of persistence of a gonorrheal infection acquired in childhood, as a rule the inflammation is due to some micro-organism other than the gonococcus. Occasionally the infection may be syphilitic or, still more rarely, tuberculous.

In the common forms of chronic endocervicitis, the infecting organisms are the streptococcus, staphylococcus, colon bacillus and gonococcus, practically always occurring as mixed infections.

Leaving out of consideration cervical chancre and uterine tuberculosis, let us consider for a moment the visible signs of chronic endocervicitis. When one exposes the cervix, besides the leukor-

rheal discharge one notes reddening and swelling of the mucous membrane of the external os and the cervical canal. The swelling may be so great as to cause an eversion of the red, endocervical mucosa. The inflamed area has a coarsely granular appearance, and the cervical canal usually is plugged with a thick mucus, which may have an opaque, yellow color from admixture with pus. On the vaginal surface of the cervix, adjoining the external os, erosion of the mucosa by the irritating cervical discharge is frequently observed. In many cases, small cysts are grouped around the inflamed area; these are formed by the closure of the mouths of nabothian follicles and are often deep-seated. Occasionally the inflammation is confined almost or quite entirely to the canal of the cervix, giving little external evidence of its existence. This condition may co-exist with a pin-hole os, leaving a reddening of the os, a mucous plug and a leukorrheal discharge as the only clues to its presence.

The true significance and importance of chronic endocervicitis have only in recent years been fully appreciated. Neglect of it has probably been due to failure to include inspection of the cervix in the routine physical examination and to an aversion on the part of gynecologists to what has been called office "tinkering." However, consideration of the following facts cannot fail to impress on us the possible evil which may result from ignoring even so common and apparently insignificant a lesion as chronic endocervicitis:

1. It is often attended with pains in the pelvis and back, which disappear without other treatment when the endocervicitis is cured.
2. It is a focus of infection, in some cases capable of producing systemic effects, just as is the case with focal infections elsewhere.
3. It is a common cause of sterility.
4. It is a point of constant irritation, which may result in the production of cancer.

In the past, the treatment of endocervicitis has been a veritable *bete noire* for both the general practitioner and the gynecologist. The "sure cures" for it were legion, just as is the case in other conditions for which there is no dependable remedy.

We have all seen these patients who have made the rounds of general practitioners and specialists without relief from their disgusting and annoying discharges, and after running the gamut of the infinite variety of douches and possibly some topical applications. These patients were in former times subjected to deep cauterization with lunar caustic or to amputation of the cervix, but the caustic sometimes caused cicatricial closure of the cervical canal and perhaps produced hematometra or pyometra, and amputation of the cervix in child-bearing women resulted in miscarriages or dystocia from cicatricial contraction of the cervix. In some cases, trachelorrhaphy was done in attempting to eradicate the diseased tissues, but recurrence was the rule; so that even these radical methods of treatment were far from satisfactory. Bearing in mind the pathology of the condition, it is easy to understand why douches are beneficial only as cleansing agents and cannot cure; it is also seen that the logical treatment is one directed toward

* Read before the Section on Obstetrics, Gynecology, and Abdominal Surgery of the A. M. A., June 29, 1923.

the eradication of the infecting organisms; and, as the inflammation usually extends well up into the cervical canal and into the very depths of the nabothian follicles, any treatment that is superficial in its effect and does not act on every part of the diseased tissues is doomed to failure. This explains why treatment with strong silver nitrate solutions, although producing prompt improvement, will rarely effect a permanent cure, and why Sturmdorf's conical excision of the cervical lining has not come up to expectations.

A new interest was awakened in the treatment of leukorrhea with the publication, in 1915, of an article by Guy L. Hunner on the treatment of leukorrhea with the actual cautery. Hunner, after dilating the cervix, made deep, longitudinal cauterizations in the canal of the cervix with the actual cautery, which resulted in permanent cure of the leukorrhea, without cicatricial contraction or other damage to the cervix. This was a great advance in the treatment of endocervicitis, and the only improvements subsequently made have been in the manner of carrying out Hunner's idea. The benzene cautery, which he used, was somewhat cumbersome and difficult to keep in working order. For this reason I have used the more handy and dependable electrothermocautery, so much employed in nose and throat work, instead of the benzene cautery. With this the degree of heat is readily controlled and deep, narrow cautery incisions, as well as punctures for cysts, can be made with it. It has the advantage also of permitting the use of the heat only where and when it is needed, so that the patient need not be frightened by feeling the heat in the vagina during introduction and withdrawal of the cautery.

Why the use of the cautery should be especially efficacious in curing endocervicitis due to gonorrheal infection is apparent when one recalls the susceptibility of the gonococcus to even comparatively low degrees of heat. Observers have reported the destruction of this organism in the tissues by prolonged immersion in hot water, by hot air treatment and even by hyperpyrexia.

In using the cautery it seems probable that a degree of heat is produced in the tissues between the cautery incisions sufficient to kill the infecting organisms without destroying the tissue cells.

The only other agent of which I know that might be capable of producing results as satisfactory as the cautery in the treatment of endocervicitis is radium. With this I have had no experience. On account of its expense and the limited supply, it is not likely to become available for general use, and would in any case be safe only in the hands of an expert. It is said to be efficacious when properly employed, but cases of stenosis of the cervix resulting from its use are mentioned in medical literature, and it entails a risk of producing sterility by its action on the ovaries or possible abnormalities of development of the ovum in the event of subsequent pregnancy.

Although my experience with the use of the electrothermocautery in the treatment of leukorrhea due to endocervicitis has been most satisfactory so far as results are concerned, it does not include a

large series of cases, and for this reason I would not have ventured to present this method as the most satisfactory manner of curing the condition under consideration had it not been that Robert L. Dickinson of New York has recommended the same method as the result of his experience with a large clientele.

I began the use of the electrothermocautery in the treatment of endocervicitis without knowledge of its use for this purpose by anyone else, and I find that the method I have used differs from that of Dickinson only in that I employed local anesthesia by infiltration of the cervix, while he apparently has not used any anesthetic except pure phenol (carbolic acid) in a few of the most sensitive cases. I offer this communication, therefore, as a confirmation of Dickinson's more extended experience with the method.

The technic is brought out in the relation of the following illustrative cases:

Case 1—Mrs. M. E. H., age 23, white, married, had been operated on about one year previously in Richmond, Va.; the body of the uterus and both tubes and ovaries were removed, leaving the cervix. The patient complained of pains and soreness in the pelvis, lower abdomen and back, profuse leukorrhea, constipation, and pain during defecation. Examination revealed the cervical canal, the external os and the vaginal portion of the cervix surrounding the os red, granular, swollen and covered with a thick, glairy mucus. There was a profuse vaginal discharge, and at the vaginal outlet there were excoriations, superficial ulcers, and a fissure in the fourchette. There was also a fissure of the anus. Both fissures were exquisitely tender. The Wassermann test was negative. Under applications of 10 per cent silver nitrate solution to the inflamed areas of the cervix and vaginal outlet, and cauterization of the fissures with crystals of silver nitrate, the condition rapidly improved and all the lesions healed except those of the cervix, which were the fundamental cause of all the trouble. A local anesthetic solution was injected into the vaginal portion of the cervix on all sides until the parts became insensitive. The cervix then was slightly dilated, wiped dry with cotton pledgets, and deep, longitudinal incisions were made in the endocervical mucosa, from above downward, on all sides. The patient was advised to remain quiet at home for a few days, and was told that a slight bloody discharge, a temporary increase in the amount of leukorrhea and possibly some discomfort in the pelvis were to be expected. She was seen about one month after this treatment, and was then free from leukorrhea, pain, and all symptoms of which she had complained.

Case 2—Mrs. L. L., age 22, white, a "grass widow," having one child 2 years old, since the birth of the child had had a very profuse leukorrhea, which caused soreness of the external parts, and she also had backache and a feeling of heaviness in the pelvis. There was a severe endocervicitis, with nabothian follicle cyst formation and excoriations about the vaginal outlet. The Wassermann test was negative. Local applications of 10 per cent solution of silver nitrate were made to the affected areas every three or four days; and, in the intervals between treatments, cleansing douches were used. The external excoriations soon disappeared, and the cervical condition promptly improved, but subsequently the progress was not satisfactory. Three weeks after treatment had been begun, the cervix was cauterized with the electrothermocautery in the same manner as described in Case 1. About one month later the patient reported that the amount of leukorrhea was insignificant, and that she felt well. The cervix looked normal except one small inflamed area,

which I was preparing to treat with a second application of the thermocautery, when the patient confided that she had been indiscrete in her relations with her fiancé and had missed her last menstrual period. In view of the possibility of pregnancy, I deferred the use of the cautery, and the patient did not return.

Case 3—Mrs. J. E. G., age 39, white, married, with one child, age 7 years, two years after the birth of the child began to have backache and pain during menstruation, which had gradually increased in severity. She also had profuse leukorrhea. Physical examination was negative except that exposure of the cervix uteri showed a granular ulcer at the upper margin of the external os, and redness and swelling of the endocervical mucosa. Two applications of 10 per cent solution of silver nitrate were made to the diseased cervical areas at intervals of one week. The leukorrhea diminished, but the inflammation persisted. October 13, 1921, the cervical ulcer and the mucosa of the cervical canal were cauterized under local anesthesia as described in the foregoing cases. Two weeks later the leukorrhea and backache disappeared, but later it returned to some extent after exertion in caring for a sick relative. January 5, 1922, the patient reported great relief from the backache, and there had been so little leukorrhea that she had discontinued the douches which she had been using for the last two or three years. Inspection of the cervix showed no sign of inflammation, its appearance being perfectly normal.

1261 Park Street.

EMETIN IN TYPHOID FEVER*

By JOHN V. BARROW, M. D., Los Angeles, and
EDWARD A. FRANKLIN, M. D., Los Angeles
(From the general unit of the Los Angeles General
Hospital.)

For several years the first of the above authors has been so favorably impressed with emetin in the treatment of typhoid fever, that he has been led to determine its value by its routine use in as large a series of cases as possible. Along with the above study, we have carefully noted the classical symptoms and laboratory findings of the disease.

Two observations, hitherto unreported, have been carefully worked out and the results noted. The first of these is the lack of the association of intestinal protozoa in typhoid. The second observation is the early and almost constant occurrence of a positive "hoemoclastic crisis."

For the purpose of connecting our work with the literature that inspired it, we wish to cite the reports of Frazier beginning in 1911, and carried to a more convincing conclusion in 1915. We omit the literature of numerous isolated but spectacular cases from various parts of the world. There are criticisms of the method based entirely on laboratory experiments. The same investigative source substantiates its use. There is no outstanding criticism of the method based on clinical experience or research.

We have taken 100 cases, treated by the regular routine in vogue just previous to this work, and compared them in detailed percentages with the cases treated by the use of emetin. The points of economic and vital interest to public, hospital, and patient may be summarized briefly as follows:

First. The source of infection is always through

the unsanitary management of an active case or through an unrecognized carrier. Therefore, any treatment that tends to render patients bacterially sterile is, at once, both clinically and economically of great value.

Second. The length of illness is of great importance. It involves suffering, expense, and danger of life. The number of days the patient is incapacitated is readily reducible to ledger figures. The lessening of suffering is not debatable. The death ratio in contagion is inversely proportional to the time and virulence of the disease. The hastening of a favorable termination by a single hour may save a life.

Any treatment that protects against the spread of disease or renders that disease less virulent, will decrease morbidity and work a public good. In order to show that the favorable statistical report that follows is not due to a fluctuating morbidity, we quote the following from the Eleventh Annual Report of the A. M. A. on typhoid fever.

"Deaths from typhoid per 100,000 population. Los Angeles, average by years, 1906-1910, 19.0; 1911-1915, 10.7; 1916-1920, 3.6; 1921, 2.6; 1922, 3.7." The cases untreated by emetin were taken from 1921, the year of lowest morbidity for our community.

The following table shows the comparison between sixty-one patients treated with emetin and one hundred treated by more usual methods.

	Patients Recovering		Fatal Cases	
	Not treated by emetin	Treated by emetin	Not treated by emetin	Treated by emetin
Onset to admission in days..	13.8	12.7	13	14
Onset to convalescence.....	41.3	24.9		
Onset to discharge or death..	58.1	42.7	24.6	23.75
Admission to discharge or death	44.75	32	12.3	9.75
Days spent in hospital.....	44.75	32	12.3	9.75
Percentage of deaths			16	6.5
Days saved in hospitalization per 100 patients		1275		
Lives saved per 100 patients.		9.5		

It will be noted that the treatment markedly shortened the course of the disease. The convalescence was not only decidedly hastened, but the severity of the disease lessened. No effort was made to hasten patients through before they were truly ready for home care. An additional five days per patient could have been gained by such a procedure. As the account stands, institutional care is saved at the rate of 1275 days per 100 patients. The above is negligible in comparison with the saving of life. The reduction in death rate from 16 per cent to 6½ per cent is an unimpeachable argument in favor of this treatment.

The complications were at times troublesome, but not of a nature to be influenced by emetin. Below is their enumeration with the number of cases and percentage:

Uncomplicated, 31 or 50.8 per cent; bronchopneumonia (not bronchitis), 13 or 21 per cent; intestinal hemorrhage, 3 or 4.9 per cent; intestinal perforation, 1 or 1.6 per cent; relapse, 3 or 4.9 per cent; cholecystitis, 2 or 3.2 per cent; meningeal symptoms, 2 or 3.2 per cent; otitis media, 2 or 3.2

*Presented to the Section on Medicine at the Fifty-second Annual Session of the California Medical Association, San Francisco.

per cent; pulmonary tuberculosis, 2 or 3.2 per cent; urinary cystitis, 1 or 1.6 per cent; arthritis (acute), 1 or 1.6 per cent; syphilis, 1 or 1.6 per cent; thrombophlebitis, 1 or 1.6 per cent; furunculosis, 2 or 3.2 per cent.

The most common complication is bronchopneumonia. This occurred more frequently in the early cases, and was partly induced by the hydrotherapy used to reduce temperature. Sponge baths were later discarded except for cleanliness. Tepid enemata serve much better for antipyretic purposes.

The behavior of the white cell counts was very carefully studied. Since typhoid is associated with bacteriaemic and toxic conditions of the liver, we decided to apply the haemoclastic crisis test to these cases. The technic followed was, the white blood count on a fasting stomach; the ingestion of 300 cc.'s of milk; the white blood count repeated in one-half and again one hour later. The tests carefully made by internes were checked by Maner, pathologist to the hospital.

In 86 per cent of the series, decided digestion—leukopenia, is shown in the early blood counts. Whatever may be its significance, this behavior of leucocytes is of service both in the diagnosis and in the treatment of typhoid fever. It occurs very early and if taken in conjunction with the usual typhoid leukopenia, it helps to establish the diagnosis and it is of prognostic value. The average leucocyte counts of the series are as follows: 6680; 5506 and 5208. In the fatal cases the count was 5350; 5000 and 4600. Every complication except pulmonary tuberculosis increased the leucocyte count, but seldom changed the result of the haemoclastic test. It is also noted that the average count in the fatal cases was more than 20 per cent below the count of those that recovered. The greater the fall in white blood cells the more severe seems the toxæmia.

The haemoclastic crisis may be tabulated along with the other classical tests in the diagnosis of typhoid fever as follows: (1) Positive blood cultures after twelve days, 40 per cent; (2) rose spots at same time, 82 per cent; (3) Widal agglutination test, 84 per cent; (4) Widal haemoclastic crisis positive, 86 per cent; (5) palpable spleen in third week, 89 per cent.

The importance of the haemoclastic test in the diagnosis of typhoid fever seems to us to be well established.

In the early cases, we thought the beneficial effect of emetin might be traceable to the fact that certain cases of typhoid concurrently harbored intestinal protozoa. We, therefore, spent considerable time in searching for the later organisms. To date, we have not found a case infested with protozoa during the active state of typhoid or during convalescence. Whatever benefit is derived must, therefore, be attributed to some other source.

This preliminary report warrants a threefold conclusion:

1. Protozoa do not seem to be present in pathogenic abundance in any of the typhoid cases of this series. The disease would seem to inhibit their growth or destroy them.

2. The haemoclastic crisis as advocated by

Widal as a liver-function test, is positive in so great a percentage of typhoid fever patients that its use is of diagnostic and prognostic value. So far as the authors are able to find out from the literature, this test has never been so applied before.

3. The routine use of emetin in typhoid fever is of decided benefit. It seems to shorten the course markedly, lessen complications, and save life. We believe its use will have a great influence in rendering every convalescent free from typhoid bacilli, and that the dreaded carrier will become as scarce as the disease ought to be.

We wish here to express our thanks to Huckleberry, Fox, Barnes, Colby, Keys, Fanson, Burling, Melcher, Bower, and Goldberg for their faithful and scientific work on the ward which made this research possible and of value. Especial appreciation is acknowledged to Medical Director N. N. Wood and to Superintendent Norman R. Martin for their splendid co-operation at all times.

(701 Westlake Professional Building, Westlake at Orange street.)

DISCUSSION

William J. Kerr, University of California Medical School, San Francisco—The report of Barrow and Franklin is of great interest to the medical profession. Although typhoid fever has ceased to be the great menace it once was in this country, there are a sufficient number of outbreaks with the usual mortality to warrant continued study of preventive and curative measures. Personally, I have had no experience in the use of emetin in typhoid fever. The results reported are very encouraging, and are confirmatory of previously reported studies. The outstanding value seems to be in the shortening of the period of illness and in the greatly reduced mortality rate. It should be kept in mind that the mortality rate may vary greatly in different epidemics, sometimes being as low as 5 per cent. It would be of interest to know the diet employed in the series of cases treated with emetin and in those not so treated. High caloric diets have been of value in shortening the convalescence and reducing the mortality. It is important to know whether the patients not treated by emetin were under the personal observation of the authors and whether all other factors such as diet, hydrotherapy, and other therapeutic measures were the same in the two series. I should like to inquire as to the method of administration, dosage of the emetin, and the nature of any toxic symptoms noted. It is of interest that this series of patients showed no intestinal protozoa. I do not know of any previous studies where the stools were carefully examined with this in mind. The haemoclastic test of Widal has not met with satisfactory results in my hands. The variations in the leucocyte counts are so slight, and there are so many conditions of technique to be met, that I have not placed much reliance on them. The results of this series, however, are so uniform that we should perhaps consider the test of more value here than in other conditions. In closing I should like to commend the authors on their interesting report. We need more studies of this sort in the field of applied therapeutics.

Dr. Barrow (Closing)—A final report of this work will be made in a few months. The cases reported are endemic and not from any epidemic. The diet, hydrotherapy, and general care are alike in both groups of cases studied. Emetin hydrochloride is given intravenously in one-third grain doses twice daily for six or eight days. The dosage is then reduced to one injection daily until convalescence is established. By this method no toxic symptoms have appeared in our cases.

EDITORIALS

WHO IS RESPONSIBLE FOR THE CHILD?

"In carrying forward a program of health education, the school becomes organized to do for the child what was formerly done in the home. In this field the school takes over parental responsibilities in precisely the same way that it has in the field of household and industrial arts."—Jesse Feiring Williams, *Hygeia*, September, 1923.

That the educational departments of our country have been planning for some time to take over the parental responsibilities in the care of children has been perfectly obvious to those who read the signs of the times. Recently a number of writers on so-called health education of school children have come out quite frankly and emphatically in claiming this right. A number of speakers at the National Educational Association conference in San Francisco brought forward this idea, of the department of education's assuming sponsorship for the development of children and relieving the parents of that responsibility; and at least one of these speakers was challenged at the time.

The quotation at the head of this article is another from a responsible source, and it shows the real object of a large element of the educational influences of our country. If many statements of this character come out through a variety of sources, it is likely that the ultimate program will be defeated, because we are fully persuaded that the American public are not yet ready to make motherhood an incubator scheme and the home a dormitory for the rearing of children under the guidance of Federal, State or any other kind of legal machinery.

COMMUNITY CHESTS

The Journal has many requests from physicians and others to discuss both sides of the "Community Chest" movement. Advocates of the movement are numerous and the points in favor of it have been given the widest possible circulation in all parts of the country.

Persons interested in the other side of the question may secure an interesting pamphlet by addressing P. O. Box 1455, Pittsburgh, Pa. This pamphlet was prepared by a committee of twenty-six important persons who spent a great deal of time studying the question when it was proposed to make Pittsburgh a "Chest" city. Additional information may be had from many chambers of commerce in cities that have not endorsed the plan.

The pamphlet in question says among other things that:

"The Community Financial Federation tends to make charity a machine, to stifle individual philanthropy, to abridge the rights of both the donors and the agencies, and its few advantages do not constitute adequate compensation for the disadvantages of the plan.

"The Community Chest penalizes the strong

and successful societies by interfering with their initiative and by capitalizing their good name and record of efficiency to the advantage of inefficient organizations, thus enabling these less worthy agencies to be financed and perpetuated through the standing and successful record of the strong and thoroughly tested organizations instead of requiring each to justify its right to exist by developing its own supporting constituency on the strength of service performed.

"Some Community Chests are becoming monopolies in the handling of public charity. They are heading in the direction of gigantic charity trusts. While in some cities the Chest is as yet a benevolent and only mildly autocratic trust, in others it is fast developing into a dominating and thoroughly autocratic body. This is particularly true in the large number of cities where the Chest is failing to raise the required amount. The acid test of its relationship to the participating agencies comes when the fund it raises is insufficient for the requirements. Fair weather does not test the staunchness of the ship.

"In several Chest cities representatives of important participating agencies complain that the executive committee of the Chest is rapidly becoming a super-governing body, determining the scope of the work of the agencies and increasingly exercising authority over them, treating as wards or dependents agencies which, through a successful history of many years, have efficiently and economically conducted their work. . . .

"The nation-wide promotion of the Community Chest plan seems to be very largely fostered by the American Committee for Community Organization, which is composed, to a very large extent, of Community Chest paid officials. . . .

"The Community Chest plan is virtually a violation of the fundamental principle of religious liberty in that it compels a donor to give to the support of agencies established and controlled by religious bodies with whose methods and aims he may not be in sympathy. The so-called privilege of 'designations of gifts' by means of which some Chest committees seek to meet this situation, is a delusion in that no matter what may be the aggregate amount of gifts which are designated for an agency, it gets only the amount allotted to it in the Chest budget. . . .

"The leading officer of an important participating agency in a Chest city in the West makes the following statement: 'With us the Chest has yet to make good. It has not altogether protected the giving public from "more than one solicitation during the year." It has not yet given the participating organizations 100 per cent of their actual allocations. It is undertaking, however, to do this by "juggling the calendar"—i. e., by shortening the year 1922 to nine months and starting the next Chest year October 1, 1922, instead of January 1, 1923. It does not take much of a mathematician to figure out that this adds 25 per cent to the amount the donor must give. With us the Chest has not reduced the cost of getting money, nor has it provided more money for the participating organizations.'

"Just as Municipal, State and Federal Govern-

ments, with the power which is behind them, can successfully get from the people large sums through taxation, so the Community Chest, where sufficiently backed by strong financial and other influential interests and where the assessment plan is rigidly employed, can, during its early history, get from the people incredibly large sums. As to whether, in the long run, this is a wise, safe and just plan for financing agencies organized and controlled by private bodies (which often are also sectarian) is a real question, particularly in view of the fact that no group of commercial or trade organizations in this or any other city, so far as we know, have adopted this method of pooling their financial resources."

The organized medical professions and the hospitals of California have not as yet either endorsed or condemned the "Chest Plan." Neither have they been consulted about it.

WHAT ARE "PRIVATE MEDICAL FEES"?

Recently there have appeared quite a number of articles which indicate that "private medical fees" are something definite and fixed. One recent article on the classification of patients in a "pay clinic" emphasizes the growing argument that patients should not be classified in accordance with income, but in accordance with their ability to pay "private medical rates."

Most of the articles and arguments constituting this propaganda are written by non-medical persons. Furthermore, they are written by persons whose past conduct shows them to be much interested in the socialization of medicine and who are themselves receiving compensation of one sort or another from socialized medical organizations.

Every true physician knows, and every well-informed layman ought to know before he writes on medical subjects, that there is no such thing as "private medical rates." He should appreciate the fact that most physicians have a more or less definite fee schedule for their work, but that the greatest part of their work is done at a figure well below this schedule.

This new movement by socialized medicine advocates suggests initial efforts to broaden the field which they can claim for patients of "pay clinics" and similar organizations. It ought not go unchallenged by the medical profession. Articles of this character are so unfair to the spirit of ethics and the practices of physicians that they ought to be resented and challenged by medical organizations everywhere. Physicians always have taken care of free work of their communities, and they always have met half-way the man who could pay something, but who could not pay the full cost of his medical service. There is nothing to indicate that the modern physician has changed in his altruism, except the propaganda of certain people, some of whom are paid salaries to promote the socialization of medicine. It is disheartening to the true physician to see in medical literature the wide admission of this kind of medical propaganda. That such a program can be carried out is but another evidence of the lack of adequate organization and co-operation among physicians themselves.

NEWSPAPERS AND PUBLIC HEALTH

More and more newspapers are devoting increasing space to matters pertaining to health. Some of their many difficulties in producing the right sort of information in their reading columns and greater cleanliness in their advertising columns is indicated by Lucy Salmon, professor of history in Vassar College:

"In the consideration of public health, the press is not so much divided against itself as it is divided with reference to the parts of the subject itself. The press has a free hand in some of its campaigns for public health—flies, rats, mosquitoes, and caterpillars are not commercialized, and campaigns against them are universally popular. But the press suffers a heavy handicap when it attempts to improve other conditions that militate against the health of the public. Efforts to secure pure milk may run counter to milk dealers and to the Grange; proposals to improve the water supply come into collision with the taxpayers; epidemics must not be reported because they reflect on the board of health and diminish out-of-town trade; news of the bubonic plague must be suppressed because its publication will interfere with travel; disgraceful living conditions in congested districts must be ignored because the tenement houses are the property of wealthy residents; the results of accidents must be minimized because they reflect on the railroads, or on important local manufacturing industries, or on the large department store; danger from fire in buildings where many persons are employed must not be dwelt upon because the owners are influential citizens; advertisements of patent cure-alls must not be rejected because they make widely known the home town where they are manufactured; a "clean-up week" must not be urged because it is opposed by the board of public works; exposure of filthy conditions behind the scenes in restaurants will result in boycotting the restaurants."

A REMARKABLE DAMAGE SUIT

The days when a physician's responsibilities were largely with his conscience and his God have passed. Once the patient accepted almost without question the opinions and service of the physician of his choice. Under these conditions, damage and malpractice suits were rare. In fact, laws and court decisions defining malpractice, and therefore the legal responsibilities of physicians, were not numerous nor drastic.

This situation is rapidly changing, and has already changed until the practice of medicine might properly be classed among the hazardous occupations. The hazards at the present time are in fact extraordinary, because of the irregularity of legislative enactments and the curious and, in some instances, weird decisions of courts.

Malpractice suits have become so frequent, based upon such a wide variety of allegations, that protective insurance is as much a necessary expense to the physician as is his office rent.

The fact that from 95 to 99 per cent of malpractice suits are without justification, as determined by court actions everywhere, does not in any

way prevent the constantly rising number of such suits. Some of these suits have a striking "news" value and always, whatever the charge and whether or not it is sustained, the physician suffers in what is far more precious to him than money. In instance after instance, the records show that the plaintiff's chief desire is to injure the physician's reputation, and he knows this can be done to a degree by bringing suit, regardless of the merits of the situation or the final court action.

Some spectacular charges are often made. One of these cases was recently tried in Paris, in which a patient actually sued a surgeon for saving his life. The patient was taken to a hospital suffering from severe internal pains. The surgeon undertook a minor operation, but found that he had to deal with a cancer and, therefore, performed a major operation, removing the cancer and at the same time depriving the patient of all hopes of motherhood.

The woman, with her husband, sued the hospital authorities for 35,000 francs damage and brought a separate suit against the surgeon on the ground that he had exceeded his authority and the agreement made with them, by performing the operation which, in the opinion of competent authority, had prolonged her life since that time. When it was pointed out that the necessity for the major operation was only revealed after the minor operation had been begun, the woman asserted that the surgeon should have arrested the operation and allowed her to recover from the anaesthetic so as to ask her consent, and she added: "This consent I would not have given," in spite of the fact that medical evidence had been produced to show that without the operation for cancer she would not have lived two years.

In rendering decision, the president of the court said: "By your own admission, Dr. — has prolonged your life measurably beyond the period when you would have died. For this you sue him. On the other hand, had he done as you wish he would now be in a fair position to be sued by your heirs for causing your death through neglect. The appeal is not allowed."

ACKNOWLEDGMENT OF REPRINTS

- Breed, Lorena M.—
See Rendall, Jean.
- Bunnell, Sterling—
Surgery of the Gall-bladder. Reprinted from the California State Journal of Medicine, July-August, 1923.
- Cole, William—
See Sutton, Irwin S.
- Cordes, Frederick C.—
See Franklin, Walter Scott.
- Franklin, Walter Scott, and Cordes, Frederick C.—
Lupus Vulgaris with Ocular Extension. Reprinted from the American Journal of Ophthalmology, July, 1923, Vol. VI, No. 7.
- Mosher, Clelia Ducl—
Some of the Causal Factors in the Increased Height of College Women. Third Note. Reprinted from the Journal of the American Medical Association, August 18, 1923, Vol. LXXXI, pp. 535-538.
- Pottenger, F. M.—
Present Status of the Treatment of Tuberculosis.

Reprinted from the Journal of the American Medical Association, August 26, 1922, Vol. LXXIX, pp. 728-732.

The Circulatory System in Tuberculosis. Reprinted from the New York Medical Journal and Medical Record for May 2, 1923.

Rendall, Jean, and Breed, Lorena M.—

Some Observations on Results with Kidney-Function Tests. Reprinted from Annals of Clinical Medicine, Vol. II, No. 2, September, 1923.

Stanley, L. L.—

Blood Transfusion Apparatus. Reprinted from the American Medical Association, March 6, 1920, Vol. LXXIV.

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Disease and Crime. Reprinted from Police Journal, November, 1922.

Nasal Refracture. Reprinted from the Laryngoscope, St. Louis Journal, 1917.

Nasal Refracture. Reprinted from Surgery, Gynecology and Obstetrics, December, 1918.

Narcotic Drugs and Crime. Reprinted from Report of Committee (G) of the Institute. Journal of Law and Criminology.

Spinal Anesthesia, Analysis of Two Hundred and Eighty Cases. Reprinted from the Journal of the American Medical Association, April 8, 1916, Vol. LXVI.

Spinal Anesthesia in Upper Abdominal Surgery. Reprinted from the California State Journal of Medicine, June, 1919.

Testicle Transplantation. Reprinted from the Journal of the American Medical Association, May 29, 1920, Vol. LXXIV.

Testicular Substance Implantation. Reprinted from Endocrinology. The Bulletin of the Association for the Study of Internal Secretions, November, 1921, Vol. V, No. 6.

Experiences in Testicular Transplantation. Reprinted from the California State Journal of Medicine, July, 1920.

An Analysis of One Thousand Testicular Substance Implantations. Reprinted from Endocrinology. The Bulletin of the Association for the Study of Internal Secretions, November, 1922, Vol. VI, No. 6.

Tuberculosis in California State Prisons. Reprinted from the Journal of Outdoor Life, Vol. XVI, No. 8, August, 1919.

Sutton, Irwin S., and Cole, William—

Report of a Case of Erythemia. Reprinted from the Journal of Laboratory and Clinical Medicine, St. Louis, Vol. VIII, No. 9, June, 1923.

Wegeforth, Harry M.—

Treatment of Snake Bite.

Wright, Harold W.—

Chronic Intestinal Amebiasis—Clinical Aspects with Special Reference to Neuropsychiatric Manifestations. Reprinted from the Archives of Neurology and Psychiatry, August, 1923, Vol. X.

Who Should Lead in Public Health—The leadership in matters pertaining to health should not be vested in non-medical sanitarians, sanitary engineers, philanthropists, or social workers, but in the physicians of the world working through their constituted organizations. They will develop future plans by conferring at definite times, with a view to strengthening old programs and devising new campaigns for promoting the health of the world and the freedom of mankind from the handicaps and penalties of preventable diseases.—(Editorial Comment, American Medicine, July, 1923.)

COUNTY NEWS

ALAMEDA COUNTY

Alameda County Medical Association (reported by E. Spence De Puy, secretary)—The regular November meeting was devoted to a discussion of the Wassermann test from the clinician's point of view.

When is a four-plus Wassermann reaction a negative reaction? Are there grounds for complaint as to the Wassermann reports furnished the clinician? What is the matter? Why not better Wassermann? A suggested remedy.—Albert M. Meads.

Reports of Wassermann by five laboratories from split specimen. Statistical report of 183 Wassermanns done on split samples by five laboratories. Study of histories of non-checks with analysis of results, together with suggestions for standardization of the Wassermann reaction.—Gertrude Moore.

A plan for official approval of laboratories. Licensing of physicians on a showing of certain qualifications is a necessary protection of the people against the dangers of incompetent medical service. The physicians themselves possess no such safeguard in California against unskilled service, namely, in the diagnostic laboratories. A plan for remedying this deficiency that should be acceptable to both the physician and the laboratories.—W. H. Kellogg.

Clinical Interpretation of the Wassermann reaction.—Stewart Irwin.

Discussion by Dudley Smith, Albert Rowe, Quinton Gilbert, Harry Foster, W. S. Kuder.

W. W. Crane Jr. was issued a transfer card to Olmstead County, Minn.

The following physicians were elected to membership: Raymond St. Clair of Oakland transferred from Reno, Nev.; Edward Babcock of the Baby Hospital, Oakland; Philip S. Potter of Berkeley transferred from Onandoga County, New York; Arthur H. Orcutt of Berkeley.

CONTRA COSTA COUNTY

Contra Costa County Medical Society (reported by L. St. John Hely, secretary)—The regular monthly meeting was held at the residence of C. R. Blake on Cutting Boulevard, October 27, 1923, at 8 p. m. Regular business of the society was transacted, minutes of the previous meeting were read and approved. A committee was appointed by the president to confer with physicians and the County Hospital in regard to pay patients being treated gratis. The following members were appointed by the president: Campbell, Beard, Cook.

Walter M. Dickie, secretary of the State Board of Health, delivered the lecture of the evening, discussing the great strides made in preventive medicine, mainly due to the vigilance of the health departments, naming yellow fever, hookworm, Asiatic cholera, smallpox, malaria, bubonic plague, and many other diseases. The doctor discussed the necessity of whole-time health departments which all the members heartily favored.

The time of the annual meeting was discussed and it was decided to hold it on November 21, at Hotel Oakland, and after the business session adjourned to the Orpheum Theater for the remainder of the evening.

The following members were present, as well as the nurses of the county hospitals and health centers: Drs. U. S. Abbott, C. L. Abbott, Horne, Blake, Denninger, Keser, Beard, Vestal, Bumgarner, Carpenter, Hely, J. B. and Clara Spalding, Mr. Withington of the Boy Scouts, Dr. Campbell, Miss Wallace, Pittsburg school nurse; Miss Burley, Crockett school nurse.

Refreshments were served by Mrs. Blake.

LOS ANGELES COUNTY

Los Angeles County Medical Association—According to the Bulletin of the Los Angeles County Medical Association, November 15, 1923, the regular November meeting of the society was held November 15, and the following program was carried out:

The Discussion of Electrical Diagnosis and Therapeutic Methods from the Standpoint of the Neuro Society.—Thomas J. Orbison.

The Diagnosis and Indications for the Surgical Treatment of Gastric and Duodenal Ulcers.—C. P. Thomas.

Vagotonia.—A. Frisch.

Alhambra Hospital—According to the Los Angeles County Medical Association Bulletin of November 1, 1923, the Alhambra Hospital has taken the following action, as expressed in a letter to Harlan Shoemaker, secretary of the Los Angeles County Medical Association:

October 15, 1923.

Harlan Shoemaker, M. D.,

605 Marsh-Strong Bldg.,

Los Angeles, Calif.

Dear Doctor: At a meeting of the Board of Directors, October 10, a resolution was passed extending the use of the hospital only to physicians and surgeons who are eligible to membership in the American Medical Association. This action was taken as the result of a request from the hospital staff at a recent meeting. Very truly yours,

ALHAMBRA HOSPITAL,

H. L. Ingraham, Secretary.

MENDOCINO COUNTY

Mendocino County Medical Society (reported by Paul J. Bowman, secretary)—On November 8, physicians of Mendocino, Sonoma, and Lake Counties had a meeting at Cloverdale. The following officers for the year 1924 were elected from the physicians of Mendocino and Lake Counties: President, R. A. Babcock of Willits; vice-president, A. M. Craig, Lakeport; secretary and treasurer, P. J. Bowman, Fort Bragg.

Redwood Coast Hospital—The Fort Bragg Hospital has been reorganized and reincorporated under the name of the Redwood Coast Hospital, Inc. A number of improvements have been made in the hospital, including new equipment for orthopedic and fracture work.

ORANGE COUNTY

Orange County Medical Society (reported by S. A. Marsden, secretary)—At the October meeting of the Orange County Medical Society, Merrill W. Hollingsworth of Santa Ana presented a paper on "The Treatment of Diabetes by the Woodyatt Formula." His talk was illustrated with some specially prepared slides.

At the November meeting of the society, F. E. Coulter of Santa Ana read a paper on "Some Observations Upon the Relation of Syphilis and Nervous System."

S. A. Marsden of Santa Ana read a report of his observations at the obstetrical clinics of the Chicago Lying-in Hospital, Johns Hopkins, New York Lying-in, and Buffalo.

At the November meeting it was voted to change the date of election of officers from April to December with the annual banquet and installation of officers in January.

The following new men have been taken into the society recently: Thomas S. Blair, Santa Ana; R. C. Burkett, Santa Ana; Ralph E. Hawes, Huntington Beach.

William Cole, formerly of Anaheim, has transferred to the Harbor Branch of the Los Angeles County Medical Society, and is now located in Long Beach.

Another drive is on for the proposed Santa Ana

Valley Hospital. There have been two previous drives, but is expected to go over this time.

SAN BERNARDINO COUNTY

San Bernardino County Medical Society (reported by E. J. Eytinge, secretary)—The society met November 6 at the San Bernardino County Hospital, with forty-five members present, thirty-two absent, five guests.

The program for the meeting consisted of an orthopedic clinic, conducted by Ellis Jones of Los Angeles. Cases were presented from the County Hospital service, the County Welfare Commission, and others.

The president, J. H. Evans, appointed the following board of councilors: C. F. Whitmer, J. S. Forsythe, C. G. Hilliard, F. H. Folkins, and H. G. Hill.

The secretary again requests that the names of those who are eligible to become members of the society be sent to him.

SAN DIEGO COUNTY

San Diego County Medical Notes (reported by Robert Pollock)—At the county society meeting of October 23, the following program was discussed: "Syphilis of the Stomach," paper read by E. J. Farrow, and discussed by Howard and Stealy. "Delayed Bowel Action," paper read by A. F. Willier, and discussed by Howard. "The Practice of Medicine: Its Success or Failure," paper read by F. A. Butler.

The San Diego County Medical Society today records 176 members in good standing who are entitled to vote at the annual election in December.

The construction work on the new St. Joseph's Hospital goes steadily on, and a few months will add this completed structure to San Diego's fine group of institutions.

A goodly number of our members motored to Los Angeles to attend the Southern California Medical Society which presented an excellent program November 2 and 3.

Thomas O. Burger has returned from the annual session of the American College of Surgeons at Chicago.

SAN FRANCISCO COUNTY

Proceedings of the San Francisco County Medical Society

During the month of October, 1923, the following meetings were held:

Tuesday, October 2—Committee on Medicine. *Vis medicatrix naturae*—W. F. McNutt, Sr. Effect of Roentgen-ray on bone-marrow—E. H. Falconer.

Tuesday, October 9—General Meeting. Presentation of portrait of N. J. Martinache, originator of the use of actual cautery in eye surgery—C. S. G. Nagel. Roentgen-ray therapy in thyrotoxicosis; its effect as judged by the basal metabolic rate—J. Marion Read.

Tuesday, October 16—Committee on Industrial Medicine. Bennett's operation for limited motion of the knee-joint. Technique and presentation of cases—G. J. McChesney. Presentation of two cases operated upon by Bennett—C. L. Hoag. Method of rating knee injuries—Mr. R. E. Haggard, Superintendent Permanent Disability Rating Department, Industrial Accident Commission.

Tuesday, October 23—Committee on Eye, Ear, Nose, and Throat. Melanosis of the conjunctiva—Louis C. Deane. Cataract extraction technique, with reference to antisepsis and iris anesthesia—P. Obarrio. Alveolar fistulae, with reference to the antrum—Merton J. Price.

Tuesday, October 30—Committee on Urology. Tuberculosis of the kidney during pregnancy—William E. Stevens. Papillomata involving the female urethra—H. A. R. Kreutzmann. Preliminary report

of 112 consecutive supra-pubic prostatectomies, with no mortalities—George L. Eaton.

Synopsis of the Paper on "Mistakes in Surgery" (read before San Francisco County Medical Society, September 18, by A. S. Keenan)—Mistakes are common in every science, in every art, and in every business. It is not to be wondered at that mistakes should occur in surgery from the very nature of the work. The surgeon works with human lives, with flesh and blood, and cannot rehearse the act or correct the proofs or begin again.

The responsibility of a surgeon is very great, because of the material with which he works. The body is infinitely complex; infinitely precious.

The strain of practice is wearing, because of the responsibility of mistakes. Lack of care is accountable for more mistakes than lack of knowledge or lack of experience. Accidents happen, but they are frequently the offspring of carelessness. Surgery is a jealous mistress and requires, from those who serve her, undivided loyalty and attention.

The occasional operator is a public danger.

Mistakes are common in not promptly diagnosing and operating upon acute osteomyelitis. Fractures offer a prolific field for mistakes. A not uncommon mistake is trying to hold a fractured femur with plaster-splints.

Other mistakes are: Unnecessary and too long use of splints in properly reduced fractures. Delay in promptly diagnosing acute abdominal conditions. Not diagnosing and operating promptly upon acute cases of appendicitis. Too much surgery done in perforation of the stomach. Neglecting to operate promptly in cases of acute obstruction of bowels. Too much surgery in late operations of acute obstruction of bowels. Ectopic pregnancy diagnosed as acute infection following attempt at abortion. Ectopic pregnancy assimilating pelvic abscess and mistake in attempting to drain through cul de sac. Injuries to the bladder from neglect to catheterize patient. Packing with gauze after operation for fistula. Packing septic wounds.

Consultants often fall into the same errors as those they are consulting with because of mistake in getting at the facts from the patient.

The greatest mistake of all is the privilege given with every medical degree, which allows a new graduate the same privilege of doing any operation that any experienced surgeon has.

Proceedings of the Eye, Ear, Nose and Throat Section of the San Francisco County Medical Society, September 25, 1923, Edward F. Glaser, chairman (reported by F. C. Cordes, secretary)—Report of cases of marked visual defects in drivers of automobiles. For discussion tending toward proper legislation—Walter Scott Franklin opened the discussion on this subject. He hoped that discussion might be the starting point toward proper legislation which would insure the proper supervision of the eyesight of people driving automobiles as essential for the public safety. He cited several cases coming under his observation.

Dr. A., age 50, had a myopia of 16 diopters in the right eye, with 13 in the left. His correction gave him R. E. V. 0.3; L. E. V. 0.6. He drove his car, an open car, daily. His glasses were nose glasses, which might easily have been blown off by the wind and left him to drive his car with vision of fingers at a few feet.

Another case, Mr. R., age 45, had R. E. V. 0.3, L. E. prosthesis. Examination of the right eye showed chronic simple glaucoma with constricted tubular field in his only eye. He drove his car daily. He was a real menace to every driver, yet bragged about his ability to drive even though his vision was so poor.

Mrs. Z., age 57, had R. E. V. with correction 0.3, L. E. V. with correction 0.4. The examination of her eyes showed bilateral incipient cataracts. She came complaining of difficulty in driving at night, due to the glare of approaching machines.

Mr. G., age 39, had a bilateral healed trachoma, pannus, with a marked refractive error that upon correction gave him R. E. V. 0.5; L. E. V. 0.6. He had been wearing nose glasses, and was driving a truck.

These cases are but a few types of the many seen by every oculist. They show clearly the necessity for visual examination in the operators of motor cars, particularly professional drivers. The requirements for locomotive engineers are very exacting, and yet in the operation of a machine, which is more difficult, no supervision is made of the physical qualifications of the driver.

Discussion—Mr. W. J. French, of the Industrial Accident Commission, said that the records of the California Industrial Accident Commission show that there were 9,328 permanent injuries reported during the five years 1917 to 1921, inclusive, and that, out of the total, 1,223 were permanent eye injuries. For the same five years the statistics disclose 393,622 temporary injuries, and included in this large total were 41,162 temporary eye injuries. More regrettable than anything else is the fact that there were eighteen cases of total blindness reported during the five years, all charged to accidents sustained by employees.

It is impossible to find in the State records many cases of marked visual defects in drivers of automobiles, because of the difficulty of keeping classifications so refined in character, and also because eye injuries are usually sustained by men with good or fair eyesight. A search revealed seven reported cases of interest to this discussion. In four instances the men sustaining injuries to their eyes returned to their usual duties as chauffeurs and auto truck drivers. In two instances the records do not show whether the employees returned to work. In the remaining instance the right eye was injured, and the man was unable to resume his employment because he had previously sustained an injury to the left eye.

R. E. Simpson, engineer of the Travelers Insurance Company, in an address delivered on May 18, 1923, before the American Society of Safety Engineers in New York, estimated that between 25,000,000 and 30,000,000 workers in this country have subnormal vision. If these figures are nearly correct, the addition of other groups in the community and their proportions of defective eyesight would show a heavy majority of our citizens deficient in this important respect.

Poor vision and bad lighting are responsible for a too large percentage of accidents. There is no doubt of the wisdom of reasonable physical examinations, added to a need to require of automobile drivers some knowledge of the cars they operate before permanent licenses are issued.

Proper legislation to control the problem of marked visual defects in automobile drivers can only come as the result of careful planning. A conference of the representatives of different interested organizations could well be undertaken, so that the months before the meeting of the California Legislature in 1925 may be utilized in preparing proposed legislation that will, if enacted into law, mean fewer accidents and a reduction in the deaths and injuries sustained each year by our citizens.

Mr. George E. Sanford, general attorney California State Automobile Association, said that the problem of reducing the great number of accidents resulting from the operation of motor vehicles is increasing and becoming more difficult as time progresses.

It is true that mere lack of knowledge and carelessness can account for a greater per cent of collisions, but the presence of operators upon the highways who are suffering from mental or physical infirmities is also answerable for a great portion of them.

The only way this percentage can be minimized is by appropriate legislation. By this is meant

sound and practical legislation which will accomplish results without working an unreasonable hardship and inconvenience upon the public.

There can be little doubt of the beneficial outcome of legislation which would, by a practical method, make it possible to segregate those who have such physical defects as glaucoma or tubular vision and extreme myopia or near-sightedness from the mass of drivers.

In California the new Motor Vehicle Act was handed down to the people with no requirement along this line. The law makes it discretionary for the suspension or revocation by the Division of Motor Vehicles of an operator's or chauffeur's license for reasons of incompetency to drive resulting from physical or mental infirmities. But this discretion is exercisable after complaints have been filed with the division against any one person. It is then often too late—damage has been suffered.

After a limited perspective into the laws of other States, we find a general expression of opinion from proper State authorities favoring legislation requiring a reasonable examination or method to be followed, for the purpose of determining whether a person is mentally and physically fit to operate a motor vehicle upon the highways before he is granted that privilege. I also am informed that upward of ten States now have such requirements upon their statute books. The State of Vermont requires that applicants have a thorough examination for physical defects, such as loss of an arm, foot, or poor eyesight. Great improvement has been found in the operating of automobiles since the law became effective two years ago. Rhode Island and several other States are at present considering the same matter.

Kaspar Pischel stated that in his opinion it is very timely to bring up this question before the society; that every effort should be made to secure legislation for the physical examination of automobile drivers. Such legislation must be liberal and reasonable. While anyone who wears glasses has a certain handicap, in fog or rain, for example, this handicap can be overcome by care. A person hard of hearing, or even a deaf person, may be a much safer driver than a reckless fellow with perfect sight and hearing, but without judgment and feeling of responsibility. A person with one eye only, while greatly handicapped, may overcome this handicap by greater care; but there are limitations. The requirements for a professional taxi or truck driver should be higher because he cannot always drive leisurely and take his time.

P. Obarrio pointed out that, even in a rigid examination, it is possible to overlook an important factor. An officer in the air service who had passed the rigid army tests and had been chosen for great hazards in the service had hemeralopia or night blindness, and had difficulty driving his machine at night. He also felt that bifocals were a definite handicap in driving.

Edmund Butler, city emergency surgeon, said that, while the vision is of great importance, the general driving ability, particularly the power to act in an emergency is of greater significance. He also learned from Captain Gleason of the Traffic Squad that among the various classes the drivers of Ford delivery trucks had the least accidents, while doctors ranked among those that had the greatest number of accidents.

Franklin in closing stated that a reasonable and practical examination is of the utmost importance. With this type of examination the most dangerous drivers would be eliminated.

St. Joseph's Hospital Notes: On November 14, St. Joseph's Hospital of San Francisco held its monthly meeting. The value of hospital and private case records was discussed by William Quinn, Philip King Brown, J. M. Stowell, and Roy Parkinson. Milton Alanson demonstrated the "Radiodor," a new vaporizer with marked advantages, an acquisition to the hospital.

In answer to the California State Medical Association, it was voted to extend physicians from outside of the city who are interested in post-graduate study the general courtesy of witnessing operations.

The staff program announced for December 12 includes "Hospital Notes of a Trip to the North-east"—Ethan Smith. Progress of the Laboratories and X-Ray Department—W. T. Cummins and Lloyd Crow.

On November 7, the executive board of the staff gave a "welcome-home" luncheon to Ethan Smith, who had been away for six months.

The patronesses of St. Joseph's Hospital held their monthly meeting and a card game during Music Week, and decided to present the new nurses' home with a modern victrola. Funds for the latter will be raised by raffling at the December meeting a special five-pound box of candy, donated by Mrs. Walter J. O'Brien.

St. Luke's Hospital Clinic Club Meeting—St. Luke's Hospital Clinical Club met at luncheon in the doctors' dining-room for its regular meeting November 20. John M. Rehfsch addressed the club on the subject of "Biophysical Data in Deep Therapy." He traced the revolutionary changes which have occurred in physics as a result of the X-ray and its effect upon the atomic theory, and stated that as a result physicists were casting about for new theories upon which to base their work. He discussed the new instruments developed for measuring X-ray intensity and penetration and exhibited some of the newer forms of these instruments with lantern-slides of others.

The next meeting will be held December 4, the subject being, "Cardiac Neurosis," by E. S. Kilgore.

San Francisco doctors and out-of-town men interested in graduate work will be welcome at any of the Clinical Club meetings.

University of California Medical Society (reported by William J. Kerr, secretary)—The regular monthly meeting of the University of California Medical Society, held in Toland Hall, University Hospital, on Thursday evening, October 25, was well attended.

S. H. Hanson of the department of pediatrics presented a case of unusual anemia in a child of 15 months. The leukocytes varied between 3000 and 9000, with a preponderance of lymphocytes. The hemoglobin varied from 12 per cent on admission to 55 per cent at the time of the presentation of the case. The red count on admission was 928,000, and had later risen to 3,600,000. The reticulated cells had increased from 1 per cent to 5 per cent, the improvement in the blood condition following transfusions of whole blood in amounts of 50 to 75 cc. A diagnosis of aleukemic leukemia was given, and an unfavorable prognosis.

W. I. Terry and H. C. Shepardson, both of the department of surgery, spoke on the development of a technique for the use of the complement fixation test in a study of thyroid disease. They were able to show that thyroid substance from normal glands and adenoma of the thyroid was able to produce changes in inoculated animals, which caused a fixation of complement. It is possible that this technique may be of considerable value in a further study of thyroid conditions. By the method it may be shown that adenoma differs from normal thyroid and from the hyperplastic gland.

W. H. Kellogg of the department of preventive medicine spoke on the determination of susceptibility and immunity to diphtheria. He outlined a method whereby the immunity in a given individual or experimental animal could be determined by the use of a small amount of blood. The antibodies in the blood serum could be determined by injection into the skin of an experimental animal, using known amounts of diphtheria toxin to neutralize any antitoxin present in the serum. Kellogg suggested that this matter may be of value where it is not convenient, economical, or accurate to use the well-known Schick reaction. Kellogg felt that the

pseudo-reactions seen in the ordinary Schick test could be eliminated by this technique.

The discussion of sinus infection and report of cases with suggestions for treatment—Arthur C. Gibson stated that surgeons were not all in agreement as to the character and extent of operative procedure in the treatment of these infections.

Sinus infection is an infection in or around the wall of the lateral sinus in its course from the torcula to the jugular bulb, most generally occurring in or near the mastoid cavity during the course of suppurated middle ear disease.

The important diagnostic features are: 1. Chilly sensation; 2. Irregular sudden rises of temperature, perhaps one or more times in twenty-four hours, and may be very fleeting in duration; 3. Increased W. B. C.; 4. Toxic appearance of patient and later symptoms are those of pyemia or septicemia.

The chief value of laboratory examination is to exclude other conditions. The treatment consists in ligation of the jugular vein in the neck and opening the sinus and removing the sinus wall until free bleeding is encountered. Early ligation is urged because of the comparative simplicity of the procedure and the slight risk as compared to the serious dangers which ensue in a case which is not ligated.

Discussion—Francis M. Shook of Oakland stated that the underlying principle was the removal of the infected area and drainage. In sinus thrombosis we formerly waited until all laboratory reports were in before operating. Even now some criticize early radical surgery. Early operation in appendicitis was formerly criticized with as little justification as is criticizing at the present time of early operation in sinus thrombosis.

Wallace Smith suggested that Gibson did not make his indications for operation sufficiently specific. If there is a definite thrombosis, ligation should be done. The indications have not been taken seriously enough, as we must be careful not to ligate needlessly. Chilly sensation is an early symptom in many conditions and, therefore, cannot be used for sinus thrombosis alone. The swelling in back of the mastoid is an unusual symptom of sinus thrombosis. The sewing of the upper end of the jugular into the skin to allow drainage is important.

Hebert stated that autopsy occasionally reveals an obliterated sinus indicating that the condition must have cleared spontaneously. Before ligation the indications must be definite and the blood culture is important when the temperature is high.

Gibson in closing stated that both jugulars can be ligated, so there need be no fear. He felt that opening the jugular was dangerous as it might infect the wound.

SAN JOAQUIN COUNTY

San Joaquin County Medical Society (reported by H. S. Chapman, secretary)—The November meeting was held in the San Joaquin County Health Center. There were some thirty members present, this being the largest meeting held for some time. Members had the pleasure of inspecting the new health center and their new library, situated in this health center.

Edmund Butler of San Francisco read a paper on "Gastric Surgery."

John J. Sippy, executive head of the San Joaquin County health center, was admitted to membership in the county medical society.

The San Joaquin County health center has been functioning for six months. Baby clinics have been formed throughout the county and are being largely attended. A clinic was recently established in Stockton by the local health board.

County Health Center Endorsed by County Society—According to United States Public Health Service reports, the San Joaquin County Medical Society and the Central California District Dental

Society have endorsed the health center for the county now being constructed and operated under the direction of the county health officer.

We hope, in subsequent editions of the Journal, to be able to publish the policies, rules and regulations which define what medical work in San Joaquin County shall go to this health center and what shall be undertaken by the physicians of the county. This definition is usually different in each health center.

SANTA BARBARA COUNTY

Santa Barbara County Medical Society (reported by Alex C. Soperl Jr., secretary). The regular meeting held November 13, 1923, at the Cottage Hospital was called to order at 8:25 p. m., with President Means in the chair. Present: Seventeen members, three internes, W. H. Eaton, N. H. Blatherwick, Ph.D., and Mr. Vandervee, Superintendent of the County Hospital. Minutes of previous meeting read and approved.

First paper—"Unusual Complications of Acute Otitis Media," by Henry J. Profant, Santa Barbara, with lantern-slides and demonstrations of areas affected, on anatomical specimens. Patient exhibited to show recovery from paralysis of left external rectus oculis. Discussion, by H. J. Ullmann, N. H. Brush, and H. Koeiod.

Second—"General Discussion of Sanitary Problems of the City," by W. H. Eaton, Captain Medical O. R. C., and City Health Officer. Discussion, by W. H. Mellinger, C. S. Stevens, A. Q. Spaulding, W. B. Cunnane, P. C. Means, C. D. Nagleman, and H. Freidell, centered mostly on the subject of proper education of youth, in hygiene, physiology, and anatomy, and the combination of the city and county health officers in one person.

Moved by Ullman, seconded by Mellinger, that the Santa Barbara County Medical Society request the Council of the city of Santa Barbara to supply the health department of the city with not less than four rooms, and that the suitability and location of these rooms meet with the approval of the City Health Officer. Passed unanimously.

Moved by Mellinger, seconded by Ullman, that a committee be appointed by the president of the society to investigate the status of the City Health Department, with a view to combining that department with the County Health Department if possible and practicable. Passed unanimously.

On invitation, Mr. Vandervee briefly described the dairy at the General Hospital, and stated he believed he could meet all the specifications for "Guaranteed Grade A raw milk." This was corroborated by W. J. Mellinger.

Arnold G. Isaac was unanimously elected a member of the society. Moved by Stevens, seconded by Mellinger, that a list of delinquent medical accounts of people who are believed able to meet same be maintained at the secretary's office, to be accessible only to members of the society. Passed.

The secretary-treasurer introduced the subject of the disposition of the considerable funds of the society still in bank. The general sentiment was that these should be kept on hand for emergencies. Moved by W. D. Sansum, seconded by Hotchkiss, that the society pay for the screen-projection apparatus used at the hospital by and for the society. Passed unanimously.

William D. Varick, formerly of Manchester, N. H., has settled here for practice, and expects to join the County Society January 1, 1924.

R. Manning Clarke, formerly of this city, has removed to 319 Hollingsworth building, Los Angeles, where he will specialize in gastro-enterology and internal medicine.

Mary West Niles, who has practiced forty-one years in Canton, China, as a medical missionary, is visiting her brother, Rev. John S. Niles, at Goleta, a suburb of this city. She has had a won-

derful experience in establishing schools for the blind and in teaching Christianity and medicine.

William H. Eaton, Captain Medical Officers' Reserve Corps, has accepted the position of City Health Officer of Santa Barbara, vice H. A. De Vilbiss, resigned. Eaton has had a wide experience in sanitation.

SOLANO COUNTY

Solano County Medical Society (reported by A. V. Doran, secretary)—The society held no meeting during the past month.

Ralph Allen has moved to Portland, Ore.,

C. Todd has moved to Concord, Calif.

SONOMA COUNTY

Sonoma County Medical Society (reported by N. Juell, secretary)—The November meeting was a joint meeting with the physicians of Mendocino and Lake Counties, held at Cloverdale, November 8. Eighteen members were present from Sonoma County, eight from Mendocino, and two from Lake.

F. W. Lux of San Francisco delivered an address on "Influenza."

Peter Paul Baron of Geyserville and Demetrius Eugene Jeffry of Sebastopol were accepted as new members of the Sonoma society.

TULARE COUNTY

Medical Society of Tulare County (reported by Elmo R. Zumwalt, secretary)—On October 28, 1923, at Hotel Johnson, Visalia, the Tulare County Medical Society met at dinner, and later held the regular meeting. Twelve members were in attendance.

Following a few matters of routine business, the meeting was turned over to the speaker of the evening, Fred H. Kruse of San Francisco, who gave a most interesting paper on "The Diagnosis of the More Common Abdominal Disorders." His paper was illustrated by a series of X-ray pictures that were very interesting.

Clayton W. Locke of Lindsay died on September 26 of heart disease. Locke has been a member of the Tulare County Society for many years, and was an active practitioner to the date of his death.

Papers for Medical Meetings—Short papers and sharp discussions should be the rule in the professional part of all medical meetings, not merely as a time-saving system, but as a necessity. It is rarely possible to keep the attention riveted on one topic any great length of time, unless it is one of extreme importance and is attractively presented in pleasing language. A revolutionary idea must, of course, be supported by detailed facts, and a discovery of new facts may be enlarged upon, but the average paper is likely to be a variation of some well-known idea which needs but little defense. The medical meeting is the place for the exchange of generalizations, experiences and conclusions. The time has long passed when scientific meetings were the only means of publishing the details of scientific work. Medical journalism fulfills this function, and to the great benefit of science, too; for the place where such data can be appreciated is in the quiet of the study rather than in the distraction of a crowd. Often do medical meetings become too tiresome for good thinking, and the recollection of them is a confused, painful jumble; whereas each member should have carried away new, sharply impressed ideas, as derived from short, crisp papers and the healthy discussion which followed. In this way it is possible to gather a crop of ideas which are never suggested by reading.—(Editorial, The Atlantic Medical Journal, October, 1923.)

SOUTHERN CALIFORNIA MEDICAL SOCIETY

Egerton Crispin, M. D., Secretary

The Southern California Medical Society held its sixty-ninth regular semi-annual meeting in Los Angeles on the 2d and 3d of November. All sessions of the meeting were well attended. The following scientific program was presented:

Edwin F. Chamberlain of San Diego read a paper on "The Importance of Early Diagnosis in Tumors of the Urinary Bladder." In this paper Chamberlain stated that tumors of the urinary bladder are either malignant or potentially malignant. Hematuria is one of the first symptoms, which indicates, a cystoscopy to determine the source of the trouble and its apparent nature. This paper was discussed by Leon Roth, Robert Day, Raymond Schultz of Los Angeles, and H. P. Newman of San Diego.

Holland G. Hambleton of Los Angeles, who has had a very large experience in the treatment of intestinal infections at the Ancon Hospital, presented his observations on "The Recognition and Treatment of Pathologic Amebiasis." The following points were brought out: The necessity of having a fresh, warm specimen to find motile amoeba. The differentiation of cyst-forms by the number of nuclei, and the forms taken by the chromatin in the nuclei. The treatment with emetin hypodermically and bismuth subnitrate in large doses by mouth with liquid diet, and rest in bed. This paper was freely discussed by Roy Hammack, John Merrill, and Paul Roen of Los Angeles.

The status of "Arterial Sympathectomy in Reynaud's Disease" was presented by Maurice Kahn of Los Angeles. Kahn's paper brought out a very free discussion by Fred Ray, Frank Pottenger, George Dock, James T. Percy, Joseph Swindt, H. D. Barnard, A. H. Zeiler of Los Angeles, and Frank J. Dingeman and M. C. Harding of San Diego.

"The Rationale and Technique of Surgical Treatment of Flat Feet" was the subject of Charles Lowman's paper, which was a lantern-slide presentation. The resumé of his paper included the following as the reasons for his procedure: When congenitally faulty, acquired flexible or rigid flat feet fail to improve after appropriate corrective treatment, operation indicated. When navicular low in childhood often becomes too large to allow forefoot to be adducted and pronated, especially if hooked type with os tibiale externum. Faulty pull of anterior tibia in front and short Achilles behind render correction by exercises impossible. Plantar ligaments must be shortened, pull of anterior tibia changed, Achilles lengthened, navicular bone replaced and permanently held. Lowman's paper was discussed by Reed, Gottlieb, O. O. Witheree, H. D. Barnard of Los Angeles, M. C. Harding of San Diego, and Captain Edgar Thompson, Medical Corps, United States Navy.

On Friday evening the first paper was by Carl Rand of Los Angeles on "Observations on Spinal Cord Tumors," with lantern-slides and case reports. The general discussion included all types of neoplasm occurring within the spinal canal. Symptomatology was considered from standpoint of location and extent of the growth in question. Pathology of tumors and variations of spinal fluid were taken up. Ten cases were presented with charts of clinical findings and microphotographs of specimens removed at operation. These included two sarcomas, three endotheliomas, one fibroma, one fibro-angioma, one chondroma, one tuberculoma, and one carcinoma.

Herbert Evans, professor of anatomy, University of California Medical School, gave the results of his experimental work determining the "Hormone of the Anterior Hypophysis." Dr. Evans, as usual, when appearing before Southern California audiences, was very well received. Keen appreciation was ex-

pressed for the high quality of the scientific observations which he presented.

The Saturday morning session opened with a paper by Burnett Wright of Los Angeles on "Cystoscopy in Children" in which he said that modern urology is on so firm a basis that few adults are denied its benefits when needed. Improvements in technic and instruments have made it possible to apply these same principles to infants and children. Every surgical lesion of the kidney and ureter, and most of those elsewhere in the urinary tract of adults, may occur in children. Wright's paper was discussed by Anders, Peterson and Farmer of Los Angeles, and A. J. Thornton of San Diego.

The next paper was by A. H. Galvin of the Johnston-Wickett Clinic of Anaheim on "Some of the Causes and Methods of treatment of Backache." Galvin divides the causes of backache into two main groups—remote and direct. He emphasizes the value of a diagnosis by elimination rather than by election, and of routine Roentgen-ray examination in these cases. He gives the symptoms, treatment, and prognosis of each of the direct causes, and stresses the points of differentiation. This paper was discussed by Alfred Gallant, John Dunlop and Charles Lowman of Los Angeles, and H. P. Newman of San Diego.

John Bacon, chief surgeon of the Miami Inspiration Copper Co., Miami, Ariz., discussed "Some Phases of Industrial Surgery." His paper presented the claims of industrial surgery as a specialty, and made a plea for the establishment of hospitals especially planned and equipped for the care of industrial injuries, financed by groups of plants according to geographical location and supported by the hospital fees usually charged for compensation cases. Provision for families of workers at a moderate fee was included in the plan. Harlan Shoemaker and C. G. Toland of Los Angeles discussed this paper.

Nelson W. Janney of Los Angeles, with lantern-slides showed a series of "Orthopedic Deformities in Endocrine Diseases." He said that the development of the skeleton and ligaments is retarded in hypofunctional endocrinopathies. Adiposity is common. Muscle tonus is subnormal, due to hormone starvation and underexercise. Orthopedic deformities, especially flat feet and lordosis, are thus caused in endocrinopathies. Knock-knees, bow-legs, and spinal curvatures are less frequent. Orthodontal deformities due to endocrine disease have been the subject of a special paper by the writer. Treatment of orthopedic deformities in endocrinopathies should be twofold: (1) orthopedic (2) by endocrine extracts. The endocrine etiology of orthopedic deformities has not been emphasized nor duly recognized in the literature. Janney's paper was discussed by Clifford Wright and Edward N. Reed of Los Angeles, and H. Lissner of San Francisco.

The last paper of the morning session was by Guy Cochran of Los Angeles upon "Hypertrophic Pyloric Stenosis in Infants." In his discussion, Cochran said that pyloric stenosis in infants is a congenital disease, the pathology being a hyperplasia of the unstriped muscle of the pylorus. The symptoms are projectile vomiting, rapid exhaustion, visible peristalsis from left to right, constipation and presence of a tumor at the pylorus. The majority of unoperated cases die. During their care constant warmth and fluids are of utmost importance. Ether anesthesia is best. The Fredet-Romsted operation is the one of choice. Of our fifty operated cases, sixteen died; the other sixty-eight are well. Our mortality is too high because these cases are not recognized, or are allowed to lose over 20 per cent of weight before operation, and are, therefore, desperate surgical risks. Cochran's paper was discussed by Edward Ruth of Hollywood, who took up the pathology of stenosis. Rexwald Brown of Santa Barbara and A. J. Thornton of San Diego took part in the discussion.

The Saturday afternoon session was opened by a

series of studies in the "Use of Insulin in Diabetes." Howard West of Los Angeles presented the first portion of the paper, which was a preliminary report on his respiratory studies and in which he said that indirect calorimetry is a valuable aid in studying the metabolism of diabetes and the effect of insulin. In the non-diabetic, insulin causes a rise in the respiratory quotient, indicating an increase in the per cent of calories derived from glucose with a simultaneous fall in the blood-sugar. The respiratory curve is similar to that following the ingestion of pure glucose. In the diabetic the effect of insulin is similar to that of the non-diabetic. The diabetic responds less readily to the ingestion of glucose, the respiratory quotient at times showing a tendency to fall. Acid bodies tend to appear in the urine when the molecular ratio of fatty acid to glucose exceeds 1.0.

The second portion of these studies were clinical phases, with results of personal observations by Bernard Smith of Los Angeles, in which he said that a maintenance diet may be considered to be one that will support a strength sufficient for the normal activity of the patient. Such a diet must be normally metabolized and must keep the patient in nitrogen balance. A glycosuria will develop if the diabetic diet greatly exceeds the caloric requirement of the patient, and a gradually increasing dosage of insulin will be needed to control the condition. Such a glycosuria may result even though the glucose value of the diet is within the tolerance limit. A glycosuria will frequently develop when the caloric value of the diet is well below the energy expenditure. Such a glycosuria will be associated with a marked excess in the nitrogen output. A study of the energy requirement of each diabetic patient is important, and it is only through such studies that the greatest good from insulin can be obtained.

H. Lissner of the University of California Medical School presented a lantern-slide clinic on "Types of Ductless Gland Diseases." Lissner's observations on these types of people with whom he has to deal were very well received and of great interest to an appreciative audience.

Elmer Belt of Los Angeles presented, with lantern slides, results of his "Experimental Work on Renal Circulation and Its Surgical Application," in which he said that the changes produced in the circulation of the kidney, following ligation of one of the larger renal arterial branches, are clearly portrayed by means of the celluloid injection method. An almost absolute ischaemia, confined to the region supplied by the blocked vessel, is followed by a late ingrowth of small anastomotic channels into the bloodless area. These increase in size, up to the fifth week when scar-tissue formation, resulting from the long period of ischaemia, again makes the area relatively avascular. The end-result is a depressed stillate scar equal in area to the region supplied by the ligated branch. The work is presented as a warning to those who might be tempted to ligate renal arterial branches in the course of operations on the kidney, and shows that restoration of function in such areas is impossible.

Frank Porter Miller of Los Angeles presented a series of studies upon the "Carbondioxide Combining Power of Blood Plasma in Pulmonary Tuberculosis." This paper was the result of blood chemical observations over a large series of patients with tuberculosis, covering a considerable period and containing interesting data in regard to the question of acidosis in tuberculosis.

On Saturday evening following an address by Robert Pollock of San Diego, the president of the society, in which he took up briefly the aims and purposes of the society, Robert Millikan, director of the Norman Bridge Laboratory of Physics, and chairman of the administrative council of the California Institute of Technology, gave the address of the evening. Millikan, in his clear and forceful way, discussed from a scientific standpoint the results of

his observations on the so-called electronic method of treatment and diagnosis, which is more or less in vogue with a certain class of "doctors" at the present time. Following the results of his observations from a purely scientific standpoint, it was his opinion that a knowledge of high school physics would have permitted many of those persons using this method of treatment and diagnosis and many of the people employing such a method to realize that, from the standpoint of physical fact, it is pure nonsense. Following this, Millikan expressed the belief that the antidote lay in a better scientific foundation or knowledge for both the physician and the general public, and that this better fundamental knowledge would prevent many people, both so-called professional men and laity, from taking up procedures that were unsound in principle and had no basis in fact.

The following officers were elected for the coming year: President, Egerton Crispin, Los Angeles; first vice-president, Rexwald Brown, Santa Barbara; second vice-president, Allen Bramkamp, Banning; secretary-treasurer, Charles T. Sturgeon, Los Angeles.

The Yardstick of Success—Investigative work in medicine and the publication of the results thereof have come to be the yardstick by which the success of the individual and the excellence of the institution in which he works is measured. Medicine must progress or retrogress, for nature is a flux and there is no standstill, and that which does not go forward is left behind; it is one of the laws that bind us. Nevertheless, there are certain humanitarian laws which are imposed upon us as well, and a consideration of these should give us pause before we plunge ourselves too completely into an absorbed contemplation of science in vitro.

The unfortunate ones whose wounds must be dressed still demand an obligation of us; skill in the care of the sick must still be employed and should still be taught. It is worthy of comment that of a recent graduating class of a famous medical school only seventeen men were destined to enter general practice. The dearth of physicians able and willing to practice medicine in our rural communities is justly a matter of some concern. Is medicine and should medicine be a self-perpetuating science working in a general way only for the ultimate good of humanity in the abstract, or should one of its functions be to impart a little warmth and comfort to the sufferers at its door? It might be said that much flour is being milled, but few are being taught to make bread.

The Journal has long been of the opinion, and has before this expressed it, that the scientific achievements of the members of our medical faculties are worthy of great recognition, and it is glad that most of our medical schools have such individuals on their faculties. It is, however, also of the opinion that those rare men who, while capable of appreciating the advances of science, have also a knowledge of the roots and branches of disease, and an understanding of their fellow men in sickness and in health, and the quality of imparting some of their knowledge and of inspiring others to seek it are worthy of still greater recognition, for they are rare indeed and their value is not to be taken lightly.—(Editorial, Boston Medical and Surgical Journal, October 18, 1923.)

"State Medicine is Extravagant Medicine—Even a member of Parliament does not work for the State for nothing, and very few State workers will do more than they are obliged for their money—they get no thanks if they do. Not only must every worker be paid, but an army of paid administrators, inspectors and financial controllers must at once be super-imposed on the workers to see that they do their work and do not spend too much money."—Sir Richard Luce.

Nevada State Medical Association

HORACE J. BROWN, M. D., Reno.....President
 CLAUDE E. PIERSALL, M. D., Reno...Secretary-Treas.
 G. L. SERVOS, M. D., Reno...Assoc. Editor for Nevada

ABSTRACT FROM NEVADA MEDICAL BULLETIN

(Editor, Horace J. Brown, 14 Thoma-Bigelow Building, Reno, Nevada)

October 15—One of the important actions taken at the recent annual meeting of the Nevada Medical Association was the raising of the dues to \$7 per year, beginning with 1924, the extra \$2 to be sent to the California Journal of Medicine so that our members will receive that publication. At the 1921 meeting, at Elko, the California Journal was adopted as our official organ, but no provision was made to send it to our members, and the action this year was to make such provision. The Journal will only be sent to each member when dues are paid; so, if you want to receive the January number, be sure to send in your dues before February 1. Those of our members who have already paid the \$5 dues for 1924 will confer a great favor upon the secretary if they will send him the remaining \$2 without his having to write to them about it. The California Journal is one of the best of the State Journals, and we are getting it for just half the regular subscription price. We will have a sample copy sent to each one of our members so you can see for yourself just what it is like. Those of our members who reside in California, and already receive the Journal as members of the California State Society, will not be required to pay the extra \$2, as we can readily see where two copies of the same publication would be superfluous. Be sure to pay your dues early, so that we can start you off with the January number.

July 15, 1923 (re-quoted)—Your editor is associate editor, for Nevada, of the California State Journal of Medicine, which is our official Journal. We quote, in part, from a letter from Dr. Musgrave, who is the editor of that publication: "We would be glad to publish for you such news and information as you wish to have reach your members and other readers of our Journal. It will be the purpose of our Journal to treat the members of the N. S. M. A. exactly as we treat those of California, Utah, and other units for which the Journal is spokesman. We would be glad to have every month, before the fifteenth, the matter which you wish published the following month." "There is one form of advertising which ought to appeal to some of the doctors of your State, and that is our directory of physicians. These cards cost \$30 a year or \$20 for six months." "We hope with your co-operation to make our Journal, under its present name or some other name, a big feature in medical journalism." Now if you have any news items, and will send them in, we will be glad to forward them on for publication. Personal items, such as removals, marriages, deaths, births, etc., are acceptable as well as hospital news and public health matters. Papers that comply with the council rulings will be accepted for publication. If anyone desires to have a professional card printed in the Journal we would be glad to attend to that also.

George K. Magee, formerly of San Francisco, has located at Yerington and taken over the practice of the late Dr. Leavitt.

W. H. Brennen of Eureka has been appointed by the Governor a member of the State Board of Medical Examiners.

The State Board of Medical Examiners held their

semi-annual meeting for the examination of applicants to practice in this State on November 5-7.

H. J. Brown of Reno has been appointed district surgeon for the Southern Pacific, vice W. H. Hood, who has been appointed consulting surgeon.

George McKenzie tendered his resignation as chief of staff of St. Mary's Hospital, but the resignation was not accepted, and he was requested to name some member of the staff to act for him during his illness.

MEDICAL ECONOMICS

Why not let our advertisers help you?

New Building of Burroughs Wellcome & Co.—The Journal is glad to carry in the advertising pages of this issue an announcement of the removal of this well-known firm's New York establishment to their new building at 9 and 11 East Forty-first street. This building, which is a modern steel-framed, fire-proofed twelve-story structure, is of pure Gothic style, handsome and attractive in appearance and a conspicuous addition to the many notable buildings in its vicinity. Located opposite the Public Library, just off Fifth avenue, this new building is easily accessible from every quarter.

The firm's general offices for the United States of America, now installed in the new premises, adequately provide for the growing needs of the business. Suitable arrangements insure rapid communication between these offices and their New York works and laboratories.

A cordial invitation is extended to the medical profession by Messrs. Burroughs Wellcome & Co. to visit their new exhibition rooms at any time to inspect the display of fine chemicals, galenicals, and other products for which the firm has been so long and favorably known.

The researches and experimental investigations carried on so many years by the firm, through its laboratories and scientific departments, have led to the accumulation of a wealth of special and unique information, which is freely available at all times to medical men and scientific workers in general.

The work of Messrs. Burroughs Wellcome & Co. in connection with particular lines of investigation, such as the preparation of portable medical outfits, designed to save space for military, exploring, hunting and other expeditions, and withstand the trying climatic and atmospheric conditions, has developed a wide variety of equipment, which will always be found at the service of those interested.

Richter & Druhe have outgrown their old location and have moved to 641 Mission street, San Francisco. In their new headquarters they will be prepared to give their usual prompt and careful attention to anyone needing hospital and surgical supplies.

Wilmot Castle Company—Mr. Charles A. Mills, the representative in San Francisco of this well-known firm, has moved his offices to 1151 Market street. The advertisements carried by this company in our Journal give valuable information about the complete line of physicians', dental, hospital, and bacteriological sterilizers manufactured by Wilmot Castle, and they will be glad to have you write to them for their catalogues, or Mr. Mills will be ready to serve you at any time, if you will either telephone or write him.

Coupons—Many of our advertisers furnish coupons for your convenience in sending for information, catalogues, etc. Try using them—it will pay. All advertisers are prepared to give you information of value if you will correspond with them, and when you do be sure and mention this Journal.

BOOK REVIEWS

Excursions Into Surgical Subjects. By John B. Deaver and Stanley P. Reimann. 188 pages. Illustrated. Philadelphia and London: W. B. Saunders Company, 1923.

A book reminiscent not only to the reader's mind, but more or less subconsciously, perhaps, to the authors', of Sir Berkeley Moynihan's volume of addresses. It lacks Moynihan's originality and energy. It brings little that is new; it will soon lie forgotten and uncalled for in the corners of library shelves.
L. E.

Pulmonary Tuberculosis. By Maurice Fishberg. Third edition, revised and enlarged. Illustrated. Philadelphia and New York: Lea & Febiger, 1922.

The third edition of pulmonary tuberculosis by Fishberg is carefully arranged and cross-indexed so that it is of value as a reference book or for continuous reading. The author quotes freely from the views of investigators in this field, as well as giving his own ideas. Much controversy has arisen in regard to the effect of the epidemic influenza on the potential or early case of pulmonary tuberculosis. The author attaches small importance to the effect of this infection, but we have noted a number of cases where the epidemic type of influenza (and this should be differentiated from the sporadic case of mild or questionable grippe, called "flu" by many laymen and physicians) has started the active spread of tuberculosis. As the type of influenza was somewhat different in different localities, so it is quite possible that its effects on the tuberculosis may also have been different in different parts of the United States and world.

Two new chapters of real value have been added. One deals with the "Reciprocal Relations Between Pulmonary Tuberculosis and Certain Physiological and Pathological Processes" including physiological functions, extrathoracic tuberculous lesions, upper respiratory disease, non-tuberculous pulmonary infections, constitutional and metabolic diseases, gastrointestinal pathology, cancer, and insanity. The other deals with the "Medico-legal and Insurance Aspects of Tuberculosis," and is of value because of the increasing interest of industrial and life insurance companies in the part played by tuberculosis in accident and disease, and the relationship of these to a co-existing tuberculous process.

The whole book has been rewritten, and includes many new illustrations.
P. H. P.

BOOKS RECEIVED

Abt's Pediatrics. By 150 specialists. Edited by Isaac A. Abt, M. D., Professor of Diseases of Children, Northwestern University Medical School, Chicago. In eight octavo volumes, totaling 8000 pages with 1500 illustrations, and separate Desk Index volume free. Now ready—Volume I, containing 1240 pages with 284 illustrations; Volume II, containing 1025 pages with 180 illustrations. Philadelphia and London: W. B. Saunders Company, 1923. Cloth, \$10 per volume. Sold by subscription.

International Clinics, a Quarterly of Illustrated Clinical Lectures and especially prepared Original Articles on Treatment, Medicine, Surgery, Neurology, etc., and other topics of interest to students and practitioners. By leading members of the medical profession throughout the world. Edited by Henry W. Cattell, M. D., Philadelphia. Volume III.

Thirty-third Series, 1923. Philadelphia and London: J. B. Lippincott Company, 1923.

Blood Chemistry Colorimetric Methods. For the General Practitioner, with Clinical Comments and Dietary Suggestions. By Willard J. Stone, M. D., Pasadena, California, Attending Physician, Los Angeles General Hospital. Introduction by George Dock, M. D., Pasadena, California. New York: Paul B. Hoeber, Inc., 1923.

Rhus Dermatitis. From Rhus Toxicodendron, Radicans and Diversiloba (Poison Ivy), Irs Pathology and Chemotherapy. By James B. McNair. The University of Chicago Press, Chicago, Illinois.

Physical Examination and Diagnostic Anatomy. By Charles B. Slade, M. D., formerly Chief of Clinic in General Medicine, University and Bellevue Medical School. Third edition, thoroughly revised. 12mo of 179 pages, illustrated. Philadelphia and London: W. B. Saunders Company. Cloth, \$2 net.

A Text-book of Anatomy and Physiology. By Jesse F. Williams, M. D., Professor of Physical Education, Teachers College, Columbia University, New York City. 12mo of 523 pages, with 369 illustrations. Philadelphia and London: W. B. Saunders Company, 1923. Cloth, \$3 net.

Principles of Vital Statistics. By I. S. Falk, Ph. D., Department of Public Health, Yale University. Octavo of 258 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1923. Cloth, \$2.50 net.

A Manual of the Practice of Medicine. By A. A. Stevens, M. D., Professor of Applied Therapeutics in the University of Pennsylvania. Eleventh edition, entirely reset. 12mo of 645 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1923. Cloth, \$3.50 net.

A Primer for Diabetic Patients. Brief Outline of Diabetic Treatment, Including Directions for the Use of Insulin, Sample Menues, Recipes and Food Tables. By Russell M. Wilder, M. D., Mary A. Foley and Daisy Ellithorpe, Dietitians, the Mayo Clinic. Second edition, reset. 12mo of 119 pages. Philadelphia and London: W. B. Saunders Company, 1923. Cloth, \$1.50 net.

The Examination of Patients. By Nellis B. Foster, M. D., Associate Physician to the New York Hospital; Associate Professor of Medicine at Cornell University, College of Medicine. Octavo of 253 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1923. Cloth, \$3.50 net.

Clinical Diagnosis. By Laboratory Methods. A Working Manual of Clinical Pathology. By James Campbell Todd, M. D., Professor of Clinical Pathology, University of Colorado. Fifth edition, enlarged and reset. Octavo of 762 pages, with 325 illustrations, 29 in colors. Philadelphia and London: W. B. Saunders Company. Cloth, \$6 net.

Gynecology. By William P. Graves, M. D., Professor of Gynecology at Harvard Medical School. Third edition, thoroughly revised. Octavo volume of 936 pages, with 388 half-tone and pen engravings and 146 microscopic drawings, 103 of the illustrations in colors. Philadelphia and London: W. B. Saunders Company, 1923. Cloth, \$9 net.

Introduction to Medical Biometry and Vital Statistics. By Raymond Pearl, Ph. D., Professor of Biometry and Vital Statistics, Johns Hopkins University. Octavo of 379 pages, illustrated. Philadelphia and London: W. B. Saunders Company. Cloth, \$5 net.

Rubber and Guttapercha Injections, Subcutaneous Injections of Rubber and Guttapercha for raising the depressed nasal bridge and altering external contours. By Charles Conrad Miller, M. D., Oak Printing & Publishing Co., Chicago, 1923.

Who's Who in America, A Biographical Dictionary of Notable Living Men and Women of the United States. Volume XII, 1922-1923. Edited by Albert Nelson Marquis. Founded 1899, revised and reissued biennially. Chicago: A. N. Marquis & Company.

Habitual Constipation, Its Causes, Consequences, Prevention, and Rational Treatment. By Ismar Boas, M. D., Professor of Medicine in Berlin; translated by Thomas L. Stedman, M. D., Author of "A Practical Medical Dictionary." New York and London: Funk & Wagnalls Company, 1923.

The Chemical Basis of Growth and Senescence. By T. Brailsford Robertson, Ph. D., D. Sc., Professor of Physiology and Biochemistry, University of Adelaide, South Australia. Monographs on Experimental Biology. Edited by Jacques Loeb, Rockefeller Institute; T. H. Morgan, Columbia University; W. J. V. Osterhout, Harvard University. Philadelphia and London: J. B. Lippincott Company.

Exercise for Health and Correction. By Frank D. Dickson, M. D., and Rex L. Diveley, M. D. Philadelphia and London: J. B. Lippincott Company.

Laboratory Diagnosis of Syphilis, A Manual for Students and Physicians. By Hideyo Noguchi, M. D., Member of the Rockefeller Institute for Medical Research, New York. 59 illustrations, 13 in color. New York: Paul B. Hoeber, Inc., 1923.

Obituary

HARRY WEIL EMERSON

(An Appreciation)

By Daniel C. Crosby, Oakland

No man lives to himself alone and every man's influence and service are needed among his fellows, in order that each may grow in all ways as he should. But the people of every community, be it city or country, level land or rugged mountainside, where they establish homes, require the specific and active ministrations of certain of their fellows.

This is true of all men, but it is of especial importance when we regard that entity which is now rapidly passing away—that institution which it has been an inspiration to know and a misfortune to lose—the family physician. He has in all modern times been an inseparable part of community life.

The older people of this city look back upon the life of many physicians in Oakland and its environs, whose names have now become tradition, and they feel that they are themselves alive or that they are better men or women for having known a Charles M. Fisher, a Frank Adams, or a George P. Reynolds.

In the lower end of this county there are still many who remember Selfridge; Buteau, the elder; and Allen. These men practiced medicine in and about Centerville when there were no automobiles, no telephones, no antitoxins, no clinical laboratories, and no trained nurses. These men were pioneers, loved for their indomitable energy and their never-failing patience and cheerful care of a whole coun-

tryside. My own recollection goes back only to Allen and Buteau, but what I have learned in the practice of medicine in twenty-five years increases vastly the respect I bear those men.

About thirty years ago there came to Centerville a young doctor who was a hail-fellow-well-met, had traveled pretty much over the country, and who was looking for a place to settle. The beauty of the Santa Clara Valley, the wholesome hospitality of its people, and the air of unpretentious prosperity of the district appealed to him and he decided to cast his fortunes there.

Graduated from Columbia College in New York City, Harry Weil Emerson knew all of the big men in medicine in New York, whose names—now become tradition—will never sink into the limbo of forgotten things as long as medical history endures.

He brought modern medical procedure—advanced for that day—resourcefulness, cheerfulness, limitless energy and sympathy with him when he came, and was soon well-established. Sayre, of blessed memory, who healed so many cripples, and by a strange irony of fate spent his last years as an arthritic, almost helplessly incapacitated, was responsible for his diagnosing a tubercular hip that had gone unrecognized and the long heavy metal splint which Emerson had made set the countryside agog, but saved the child.

The doctor prospered and achieved to the confidence and respect of the entire community; married Miss Stevenson, the eldest child of one of the earliest settlers and most substantial citizens; and became an integral part of the life of the community. With professional success came adequate financial reward, but the thing was true of him which is true of most physicians—much of the unknown record of his activities are found in "the sad and simple annals of the poor" in which every countryside abounds.

He continued his work long after his health began to fail, and the efforts of his faithful wife to protect him from calls at untimely hours aroused only his impatience, for the call of sickness had rung to him for so many years that his own failing strength did not deafen his listening ears to the calls of those who looked to him for help.

He remained in harness until he was stricken and his two faithful colleagues in the community came to his aid, and rendered him tender, painstaking, faithful service, but his load was too great, his strength was sapped, and neither medicine nor nursing, nor the ardent wishes of an anxious community availed, and in a few days he was taken away.

The occasion of his funeral was marked by an almost complete suspension of business in the district. His late residence, the grounds about, and the street outside were crowded with people from all walks of life—whites and Orientals, Americans and Latins, young and old, prosperous citizens and rugged laborers, all gathered to show by their presence their state of mind with reference to a family physician gone to his reward.

Fundamentals in Bone Transplantation—The requirements regarded by Fred H. Albee, New York (Journal A. M. A., October 27, 1923), as fundamentals in this work are: The graft should be autogenous. The graft should be so placed and contacted that conditions are favorable to the early and sufficient establishment of blood supply. Within limits, the graft should be the internal fixation agent. The graft should, when possible, be so inserted that corresponding cambium layers come in close contact, and should consist of all four bone layers. The graft should be of such cross-section and strength that it will resist fracture during and after the period of external support until osteogenesis of sufficient amount occurs. The tibial inlay is regarded by Albee as being from every standpoint the ideal type of graft.

NEW MEMBERS

San Francisco—H. C. McClenahan, John E. Bohm, Jay Jacobs, Clarence G. Potter, G. A. Wislicenus, Francis T. Sheehy.

Santa Barbara—Arnold G. Isaac.

Geyserville—Peter Paul Baron.

Sebastopol—Demetrio E. Jeffry.

Bakersfield—Leland W. Ellis.

Santa Ana—Thomas S. Blair, R. C. Burkett.

Huntington Beach—Ralph E. Hawes.

Oakland—Raymond St. Clair, Edward Babcock.

Berkeley—Philip S. Potter, Arthur H. Orcutt.

DEATHS

Emerson, Harry W. Died at Centerville, October 21, 1923, age 60. Graduate of the College of Physicians and Surgeons, New York City, 1892. He was a member of the Alameda County Medical Society, the California Medical Association, and the American Medical Association.

Grinnell, Fordyce. Died at Pasadena, October 5, 1923, age 79. Graduate of the Miami Medical College, Cincinnati, 1873. Licensed in California in 1885. He was a member of the Los Angeles County Medical Association, the California Medical Association, and the American Medical Association.

Lyon, Samuel B. Died at Los Angeles, November, 1923, age 64. Graduate of the University of Illinois College of Medicine, Chicago, 1894. Licensed in California in 1899. He was a member of the Los Angeles County Medical Association, the California Medical Association, and the American Medical Association.

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This volume of the Journal has not been indexed by subject as it is felt that it should not be necessary because of the very thorough and complete indexes contained monthly in the Index Medicus and issued quarterly by the A. M. A. in the Quarterly Cumulative Index to Current Medical Literature. This latter publication constitutes one of the extremely valuable services of our national organization. The four volumes, issued every year, give the index to all worthwhile medical literature from all journals in the world. It is well done, and the subscription price is nominal.

With an author-index of the California State Journal, it is easy to establish the bibliographical record of any of our members, and this will become exceedingly useful in the years to come.

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